

# *The Cincinnati*

## **ELECTRIC DRILLS GRINDERS - BUFFERS PORTABLE TOOLS**

— REPRESENTED BY  
**MORGAN TOOL & EQUIPMENT CO.**  
850 EAST RITTENHOUSE ST.  
TEN: 2266 PHILA., PA.



**THE CINCINNATI ELECTRICAL TOOL CO.**

DIVISION OF THE R. K. LEBLOND MACHINE TOOL CO.  
CINCINNATI, OHIO, U. S. A.



# *The Cincinnati*

ELECTRIC DRILLS

SCREW DRIVERS

NUT SETTERS

TAPPERS

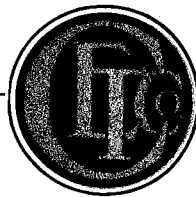
AERIAL GRINDERS

TOOL POST GRINDERS

BENCH AND PEDESTAL BUFFERS

BENCH AND PEDESTAL GRINDERS

ABRASIVE CUT-OFF MACHINES



**THE CINCINNATI ELECTRICAL TOOL CO.**

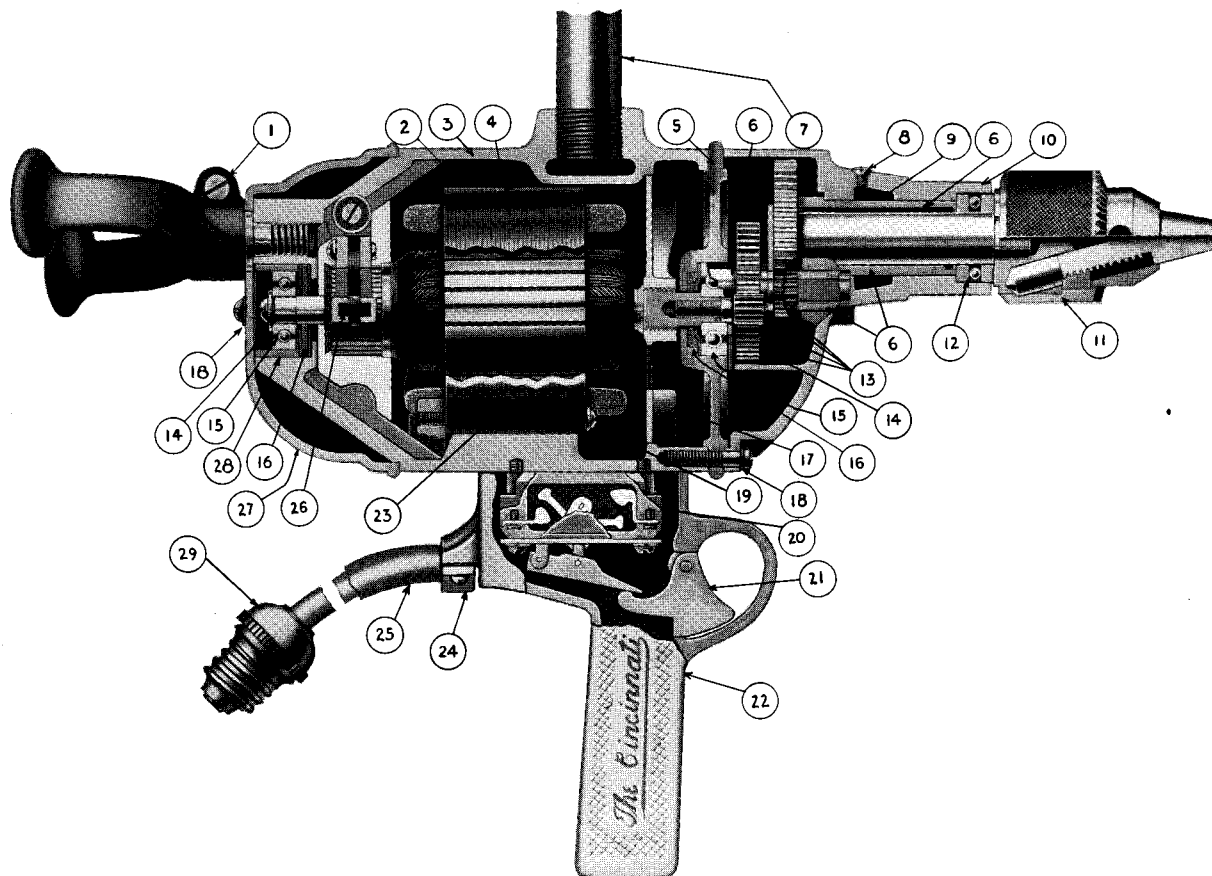
DIVISION OF THE R. K. LEBLOND MACHINE TOOL CO.

CINCINNATI, OHIO, U. S. A.





## *An X-Ray Examination of Worth*



- |                                                                                                      |                                                                                                                            |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1 — Detachable end handle in alignment with chuck.                                                   | 17 — Design of fan insures a cool motor.                                                                                   |
| 2 — Ducts provide ample circulation of air.                                                          | 18 — Lock washers for all screws.                                                                                          |
| 3 — Cylindrical frame for maximum strength.                                                          | 19 — Anchor screws, plus ribs in housing hold motor in place.                                                              |
| 4 — Universal motor for use on A. C. and D. C.                                                       | 20 — Double acting, fully enclosed, quick make-and-break two-pole switch.                                                  |
| 5 — Air outlet.                                                                                      | 21 — Trigger for operating switch is conveniently located and protected in handle.                                         |
| 6 — Phosphor bronze bearing.                                                                         | 22 — Switch handle of unique design, eliminating cramping of the hand and tiring the wrist.                                |
| 7 — Detachable side handle permits close corner drilling.                                            | 23 — Ribs support and gives added strength to housing.                                                                     |
| 8 — Removable screw conveniently located for oiling.                                                 | 24 — Cleat for clamping protecting hose.                                                                                   |
| 9 — Oil reservoir.                                                                                   | 25 — Protection hose, prevents short bends or kinks in cable.                                                              |
| 10 — Front cap of straight line design and spindle offset for close corner drilling.                 | 26 — Brushes are mounted on die-cast brush holders with adjustable spring tension. Easily accessible by removing back cap. |
| 11 — Three-jaw geared chuck, screw back, easily removed.                                             | 27 — Air intake.                                                                                                           |
| 12 — Ball thrust bearing protected from dust.                                                        | 28 — Steel sleeve for ball-bearing prevents internal binding and friction.                                                 |
| 13 — High grade alloy steel gears, hardened and run in grease.                                       | 29 — Attachment plug with ground wire connection for connecting to any lamp socket.                                        |
| 14 — Large grease compartment.                                                                       |                                                                                                                            |
| 15 — Extra large, deep groove radial ball-bearings support the armature shaft.                       |                                                                                                                            |
| 16 — Felt washers and metal retaining rings prevent escape of lubricant or entrance of dust or grit. |                                                                                                                            |



TYPE UL



TYPES ULS, UAS, UBS, UK

## 1/4-Inch "Junior" Electric Drill

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

A POWERFUL, light-weight drill, suitable for use in garages, service stations, woodworking and sheet metal plants and light production work of all kinds. Streamline design for close corner work. Armature is mounted on graphite impregnated bronze bearings; spindle bearing is of bronze and ball thrust bearing is provided to carry thrust load. Gears are of special analysis alloy steel, heat-treated and run in grease-tight compartment. Fully enclosed switch is conveniently located in the handle.

**EQUIPMENT** — 10 feet rubber-covered three-wire cable, attachment plug and three-jaw screw back chuck.

For extra attachments, see page 10.

THESE powerful and rugged drills are especially adapted for automobile body work, car building and metal drilling of all kinds. Ideal drills for wood boring, and especially handy for the contractor. Equipped with high-grade ball bearings on the armature shaft and ball thrust bearing on the drill spindle. Gears are of alloy steel, heat-treated, and run in grease-tight compartment. Fully enclosed two-pole self-releasing trigger switch, with locking pin for positive operation.

**EQUIPMENT** — 10 feet rubber-covered three-wire cable, attachment plug and three-jaw screw back chuck.

For extra attachments, see page 10.

Drilling stands for above drills shown on page 9.

### SPECIFICATIONS

Type	Volts	Drilling Capacity Steel	No Load Speed R. P. M.	Length, Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
UL	110	1/4"	2000	11"	4	6	ACE
UL	220	1/4"	2000	11"	4	6	ACID
ULS	110	1/4"	1800	12 1/8"	6	10	UHLAN
ULS	220	1/4"	1800	12 3/8"	6	10	ULNAR
UAS	110	1/4"	1600	13 1/2"	6 1/2	10	ACACIA
UAS	220	1/4"	1600	13 1/2"	6 1/2	10	ACME
UBS	110	5/16"	1400	13 3/4"	7	10	ACRE
UBS	220	5/16"	1400	13 3/4"	7	10	ACUTE
UK	110	3/8"	1200	14"	8	11	ABODE
UK	220	3/8"	1200	14"	8	11	ADDER

Also furnished for 250 volts, regular list price.

*The Cincinnati*



$\frac{1}{2}$ -inch

## *Standard Duty Ball-Bearing Electric Drill*

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

A POWERFUL Drill, particularly adapted for Garages, Service Stations and general maintenance work in industrial plants and small shops of all kinds. An ideal tool for the electrician or general repairman. Gears are of alloy steel, heat-treated and run in grease-tight compartment. High-grade ball bearings on armature shaft. Ball thrust bearing on chuck spindle. Fully enclosed, two-pole self-releasing trigger switch, with locking pin for positive operation.

EQUIPMENT — 10 feet rubber-covered three-wire cable, attachment plug, spade handle, with chuck key holder, removable side handle and three-jaw screw back chuck.

For extra attachments, see page 10.

Drilling stand for above drill shown on page 9.

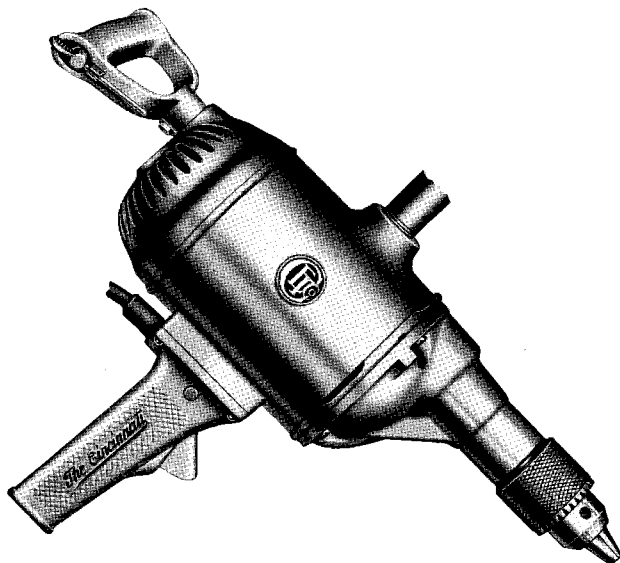
### SPECIFICATIONS

Type	Volts	Drilling Capacity Steel	No Load Speed R. P. M.	Length Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
UO	110	$\frac{1}{4}$ "	550	16 $\frac{1}{4}$ "	14	20	ABUSE
UO	220	$\frac{1}{2}$ "	550	16 $\frac{1}{4}$ "	14	20	ABOUND

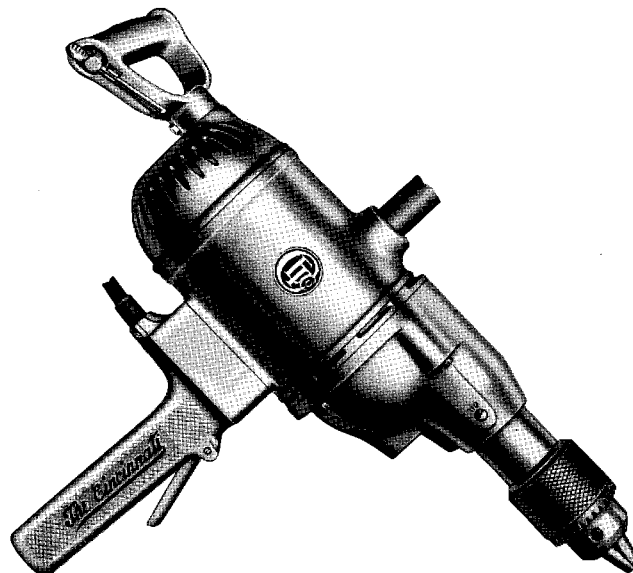
Also furnished for 250 volts, regular list price.



THE CINCINNATI ELECTRICAL TOOL CO.



$\frac{3}{8}$ ,  $\frac{1}{2}$  and  $\frac{5}{8}$ -inch Capacities



$\frac{3}{4}$ -inch Capacity

## Heavy Duty Ball-Bearing Electric Drills

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

THESE Heavy Duty Drills are particularly adapted for general production work in metal-working industries of all kinds. Rugged design and exceptional power insure long and efficient service for continuous production. Gears are of alloy steel, heat-treated, and run in grease-tight compartment. High-grade ball bearings on armature shaft. Ball thrust bearing on chuck spindle. Fully enclosed, two-pole self releasing trigger switch, with locking pin for positive operation.

EQUIPMENT — 10 feet rubber-covered three-wire cable, attachment plug, spade handle, with chuck key holder, removable side handle and three-jaw screw back chuck.

For extra attachments, see page 10.

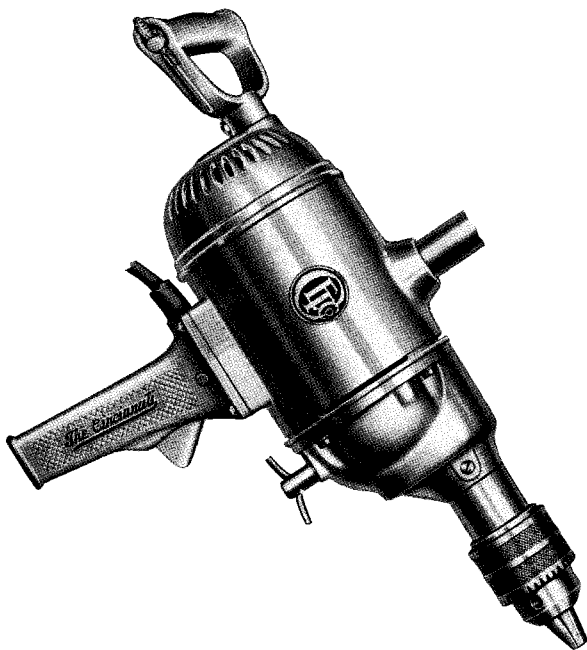
Drilling stands for above drills shown on page 9.

### SPECIFICATIONS

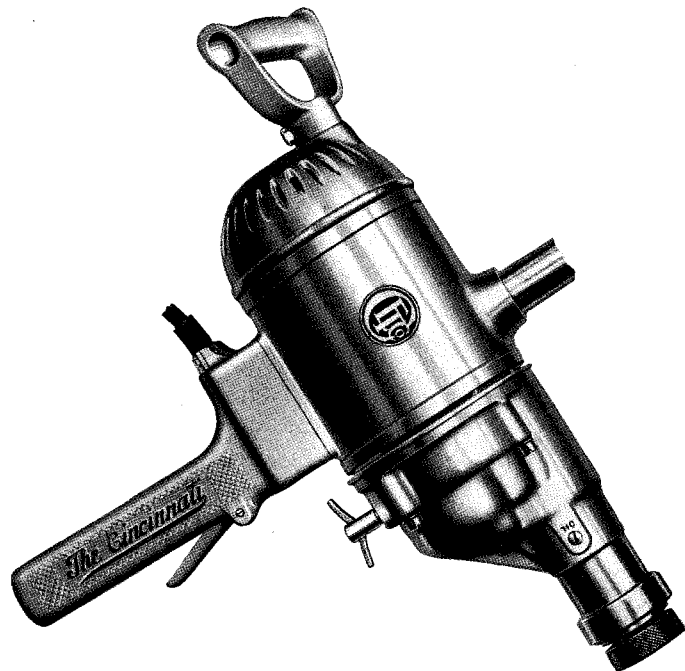
Type	Volts	Drilling Capacity Steel	No Load Speed R. P. M.	Length Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
UT	110	$\frac{3}{8}$ "	800	16"	14	20	ABOUT
UT	220	$\frac{3}{8}$ "	800	16"	14	20	ABSENT
UH	110	$\frac{1}{2}$ "	550	17"	17	25	ABET
UH	220	$\frac{1}{2}$ "	550	17"	17	25	ACCORD
UE	110	$\frac{5}{8}$ "	450	17 $\frac{1}{2}$ "	19	30	ABACK
UE	220	$\frac{5}{8}$ "	450	17 $\frac{1}{2}$ "	19	30	ABIDE
UW	110	$\frac{3}{4}$ "	425	21 $\frac{1}{4}$ "	28	45	AGATE
UW	220	$\frac{3}{4}$ "	425	21 $\frac{1}{4}$ "	28	45	AGENT

Also furnished for 250 volts, regular list price.

*The Cincinnati*



1/2 and 5/8-inch Capacities



7/8-inch Capacity

## Heavy Duty Syncro-Mesh Two Speed Drills

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

**H**USKY ball-bearing two-speed drills, the last word in portable tools for general maintenance, as well as production work, where a wide size range of drilling is required. Syncro-mesh gearing permits speed changes, while motor is running, by merely shifting speed-change lever — no clashing of gears possible.

These drills, when used in connection with the stands, as shown on page 10, have all of the advantages of a portable two-speed drill press.

Gears are of special alloy steel, heat-treated and run in grease-tight compartment. The armature is mounted on deep-groove ball bearings, with ball thrust bearing on spindle. Equipped with fully-enclosed two-pole self releasing trigger switch, with locking pin for positive operation.

Equipment for Types UD and UED — 10 feet rubber-covered three-wire cable, attachment plug, spade handle with chuck key holder, removable side handle and three-jaw screw back chuck.

Equipment for Type UR — 10 feet rubber-covered three-wire cable, attachment plug, spade handle, removable side handle, and No. 2 Morse Taper Socket.

For extra attachments, see page 10.

Drilling stands for above drills shown on page 9.

### SPECIFICATIONS

Type	Volts	Drilling Cap. Steel	No Load Speed R. P. M.	Length Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
UD	110	1/2"	550-800	18"	19	25	ALONG
UD	220	1/2"	550-800	18"	19	25	ABBEY
UED	110	5/8"	500-750	18 1/4"	20	28	ADRIFT
UED	220	5/8"	500-750	18 1/4"	20	28	ADVERB
UR	110	7/8"	380-680	19"	26 1/2	45	LAIR
UR	220	7/8"	380-680	19"	26 1/2	45	LAKE

Also furnished for 250 volts, regular list price.



**7/8-inch Capacity**

**1 and 1 1/4-inch Capacities**

## Heavy Duty Ball-Bearing Electric Drills

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

**POWERFUL**, sturdy and compact heavy-duty drills, especially built for heavy drilling in structural steel boiler plate, ship-building and heavy machine-shop drilling of all kinds. Gears are of alloy steel, heat-treated and run in grease-tight compartment. Deep-groove radial ball bearings on armature shaft; ball thrust bearing on spindle.

Equipped with a fully enclosed two-pole self releasing trigger switch.

Equipment for Type UN — 10 feet rubber-covered three-wire cable, attachment plug, spade handle and removable side handle.

Equipment for Types UP and UG — 10 feet rubber-covered three-wire cable, attachment plug, spade handle, feed screw and removable side handle.

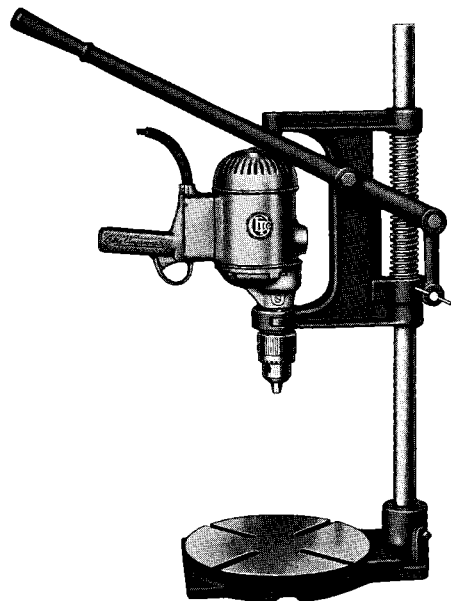
For extra attachments, see page 10.

Drilling stands for above drills shown on page 9.

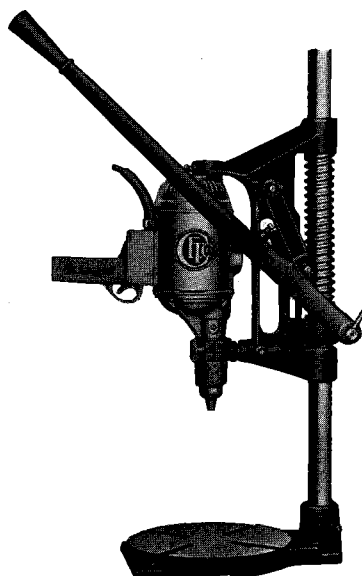
### SPECIFICATIONS

Type	Volts	Drilling Capacity Steel	No Load Speed R. P. M.	Taper Socket	Length, Overall	Net Weight, Pounds	Shipping Weight Pounds	Code Word
UN	110	7/8"	410	No. 2	18"	25	45	LEGION
UN	220	7/8"	410	No. 2	18"	25	45	LEASE
UP	110	1"	335	No. 3	19 1/2"	32	53	UKASE
UP	220	1"	335	No. 3	19 1/2"	32	53	UMBER
UG	110	1 1/4"	290	No. 3	20"	35	55	URGE
UG	220	1 1/4"	290	No. 3	20"	35	55	USHER

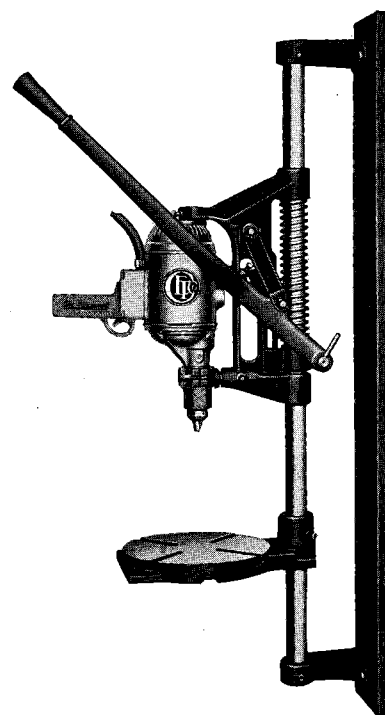
Also furnished for 250 volts, regular list price.



**No. 12 Bench Drill Stand**  
For Use With  
"The Cincinnati"  
Types UT and UO Drills only



**No. 00 Bench Drill Stand**  
For Use With  
"The Cincinnati" Drills,  
 $\frac{1}{2}$ " to  $1\frac{1}{4}$ " Capacity

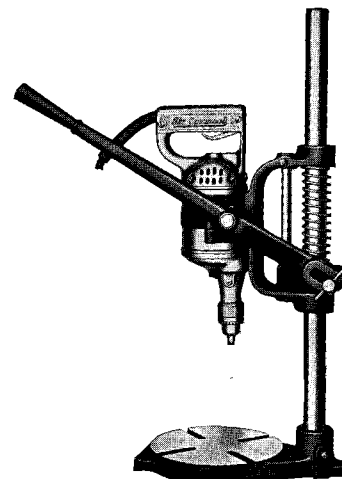


**No. 00W Post Drill Stand**  
For Use With  
"The Cincinnati" Drills,  
 $\frac{1}{2}$ " to  $1\frac{1}{4}$ " Capacity

## Bench and Post Drill Stands

THESE Drilling Stands have been designed for use with THE CINCINNATI Electric Drills from  $\frac{1}{4}$ " to  $1\frac{1}{4}$ " capacity. The drill supporting bracket can be set at any point on the column and raised or lowered as desired. The weight of the drill and supporting bracket is counterbalanced through the spring on the column. The Electric Drill is locked or released in the bracket by means of a hinged clamp and thumb-screw (no tools required). Depth of holes to be drilled is regulated by an adjustable stop on the column. Lever feed with quick return.

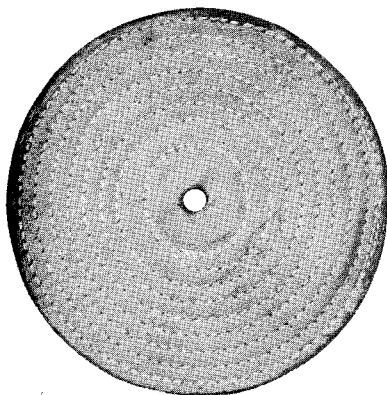
When ordering No. 00 or No. 00W Stands, mention the type and serial number of the Drill with which stand is to be used, so that proper adapter may be furnished.



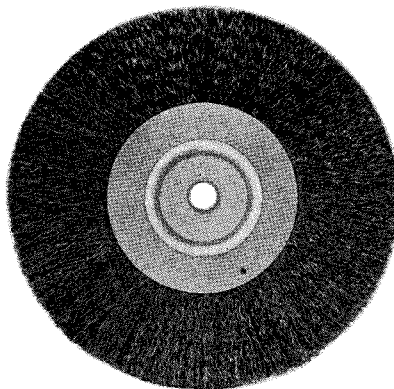
**No. 10—DRILL STAND** for use with  
Types ULS, UAS, UBS, UK Drills,  
N1 and N2 Screw Drivers and  
UJ Tapper.  
Cannot be used with  $\frac{1}{4}$ "  
Junior drill.

### GENERAL SPECIFICATIONS

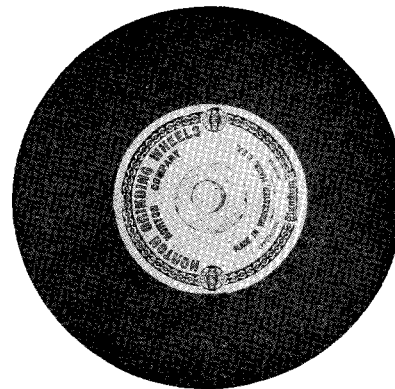
	No. 10	No. 12	No. 00	No. 00W
Height of Column.....	24"	30"	33"	38"
Diameter of Column.....	$1\frac{1}{8}$ "	$1\frac{1}{8}$ "	$1\frac{1}{4}$ "	$1\frac{1}{4}$ "
Distance from center of Column to Center of Drill Bit..	$5\frac{3}{8}$ "	7"	7"	7"
Feed Travel.....	3"	4"	5"	5"
Maximum Distance from Base to Drill Chuck.....	14"	$13\frac{1}{8}$ "	13"	14"
Size of Base.....	7" x $10\frac{3}{4}$ "	10" x 13"	10" x 13"	8" Dia.
Net Weight.....	23 lbs.	40 lbs.	45 lbs.	60 lbs.
Shipping Weight.....	38 lbs.	60 lbs.	75 lbs.	105 lbs.
Code Word.....	RACE	RABID	RANGER	RAPIER



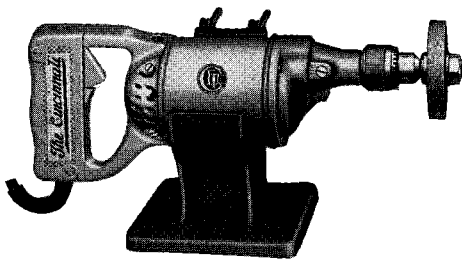
**SEWED RAG BUFFING WHEELS**  
For sizes, see price sheet.



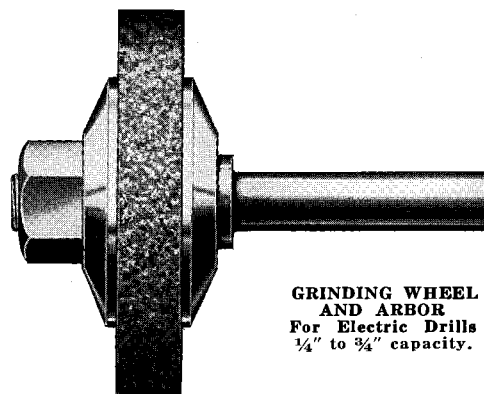
**WIRE WHEEL BRUSHES**  
For sizes, see price sheet.



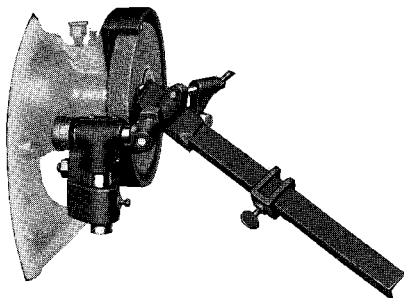
**GRINDING WHEELS**  
For sizes, see price sheet.



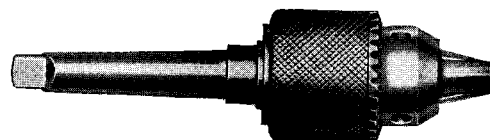
**GRINDING OUTFIT**  
For Types ULS, UAS, UBS, UK Drills.  
Cannot be used with Type UL  $\frac{1}{4}$ " Junior.



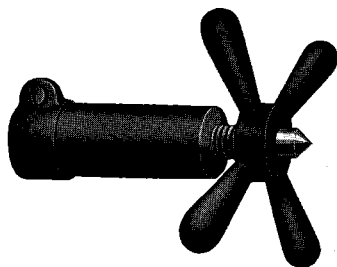
**GRINDING WHEEL  
AND ARBOR**  
For Electric Drills  
 $\frac{1}{4}$ " to  $\frac{3}{4}$ " capacity.



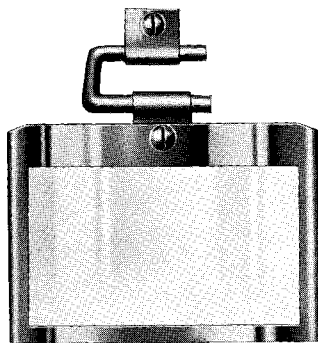
**TWIST DRILL GRINDING ATTACHMENT**  
For grinding accurately and quickly straight and taper shank twist drills up to  $1\frac{1}{4}$ " diameter. When ordering, give Type and serial number of grinder with which attachment is to be used, so that proper adapter may be furnished.



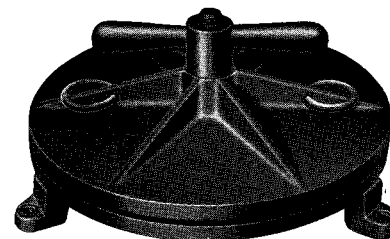
**CHUCK WITH MORSE TAPER ARBOR**  
 $\frac{1}{2}$ " chuck with No. 2 or No. 3 Arbor  
 $\frac{5}{8}$ " chuck with No. 2 or No. 3 Arbor  
 $\frac{3}{4}$ " chuck with No. 2 or No. 3 Arbor



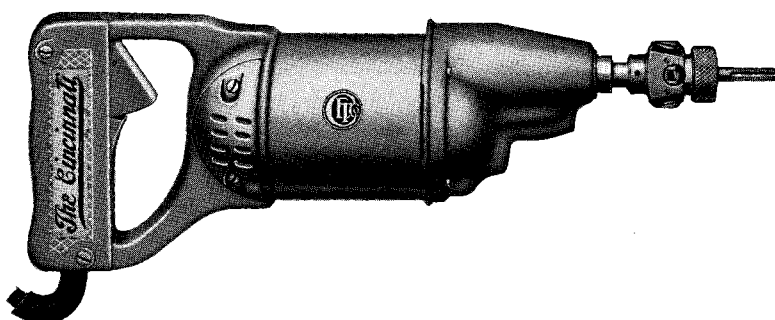
**FEED SCREW  
FOR ELECTRIC DRILLS**  
 $\frac{1}{2}$ " to  $1\frac{1}{4}$ " capacity.



**SHATTERPROOF GLASS EYE-SHIELD**



**ABRASIVE DISC PRESS**



## Ball-Bearing Tapping Machine

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

**E**LECTRIC Tapper especially designed for speeding up tapping jobs in sheet metal plants, locomotive shops, ornamental iron works, car builders, also for fitting aprons, splash pans, etc., on machine tools. No reversing switch is necessary, as the chuck automatically reverses at nearly twice the forward speed with a backward pull when the hole is tapped. The armature shaft is mounted on ball bearings and a ball thrust bearing is also provided to take the thrust load. The gears are a special analysis alloy steel, heat-treated and run in a grease-tight compartment. A two-pole self-releasing trigger switch with locking pin for positive operation is standard equipment.

**EQUIPMENT** — 10 feet of rubber-covered three-wire cable, attachment plug and a special chuck for holding taps.

No. 10 Bench Drill Stand as shown on page 9 can be used with this tool.

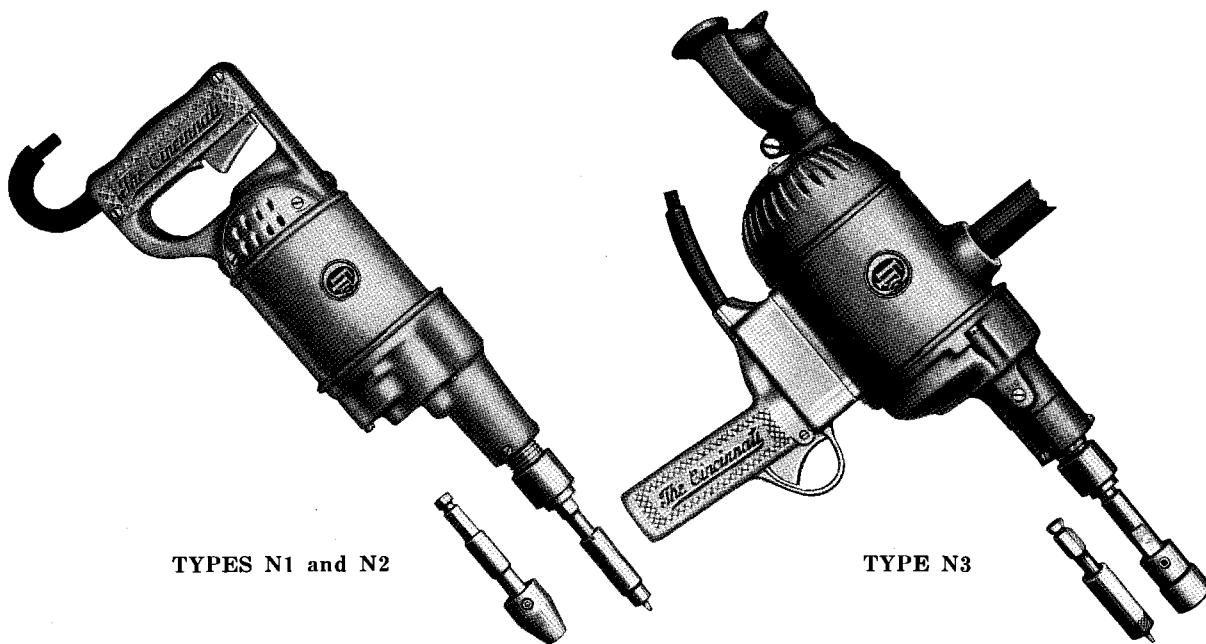
### SPECIFICATIONS

Type	Volts	Capacity, Cast Iron	Capacity, Steel	Capacity, Brass and Alum.	Forward Speed	Reverse Speed	Length, Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
UJ	110	$\frac{3}{8}$ " Tap	$\frac{1}{4}$ " Tap	$\frac{3}{8}$ " Tap	350 R.P.M.	500 R.P.M.	14"	8 $\frac{1}{2}$	11	<b>BADGE</b>
UJ	220	$\frac{3}{8}$ " Tap	$\frac{1}{4}$ " Tap	$\frac{3}{8}$ " Tap	350 R.P.M.	500 R.P.M.	14"	8 $\frac{1}{2}$	11	<b>BAGGY</b>

Also furnished for 250 volts, regular list price.



THE CINCINNATI ELECTRICAL TOOL CO.



TYPES N1 and N2

TYPE N3

## Electric Screw Drivers and Nut Setters

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

A POWERFUL tool for speeding up production in manufacturing plants of all kinds wherever there are screws to be driven or nuts to set. Equipped with positive clutch on the spindle, which disengages instantly when forward pressure on the tool is relieved. The alloy steel gears are heat-treated and run in grease-tight compartment. High-grade ball bearings. Ball thrust bearing on spindle. Fully enclosed two-pole self-releasing trigger switch, with locking pin for positive operation.

N1 is suitable for driving wood screws up to No. 12, 2" long; lag screws up to  $\frac{3}{8}$ ", 3" long; nuts on bolts up to  $\frac{1}{4}$ " diameter.

N2 is suitable for driving wood screws up to No. 16, 3 $\frac{1}{4}$ " long; lag screws up to  $\frac{3}{8}$ ", 4" long; nuts on bolts up to  $\frac{3}{8}$ " diameter.

N3 is suitable for driving wood screws up to No. 20, 4" long; lag screws up to  $\frac{3}{8}$ ", 4 $\frac{1}{2}$ " long; nuts on bolts up to  $\frac{1}{2}$ " diameter.

EQUIPMENT — 10 feet rubber-covered three-wire cable, attachment plug, two screwdriver bits with centering sleeves (or one socket wrench as selected).

Reversing switch for backing out screws, nuts or bolts furnished if desired. See price sheet.

No. 10 Bench Drill Stand shown on page 9 can be used with Types N1 and N2.

No. 00 Bench Drill Stand shown on page 9 can be used with Type N3.

### ACCESSORIES FOR SCREW DRIVERS AND NUT SETTERS



Screw Driver Bit



Centering Sleeve



Socket Adapter for Hexagon or Square Sockets



Square Socket



Hexagon Socket

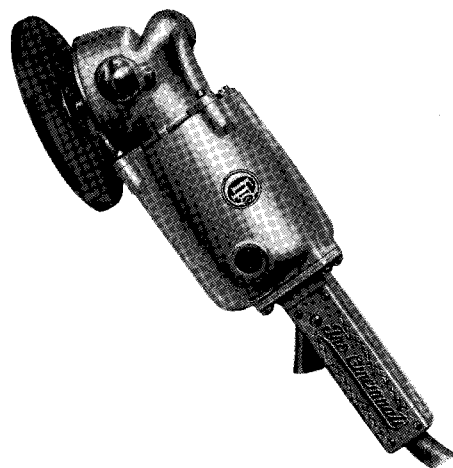
When ordering sockets, specify whether hexagon or square and give dimension across flat of nut.

### SPECIFICATIONS

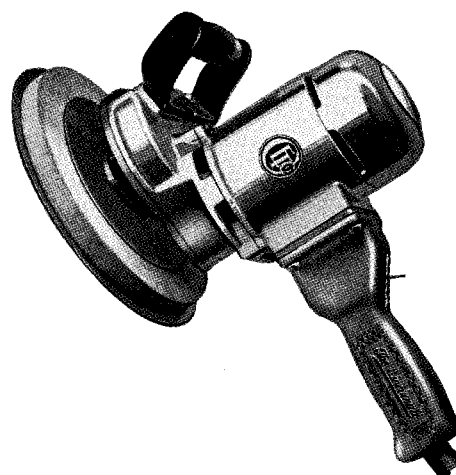
Type	Volts	No Load Speed R. P. M.	Length, Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
N 1	110	450	13 $\frac{3}{4}$ "	7	11	NABOB
N 1	220	450	13 $\frac{3}{4}$ "	7	11	NADIR
N 2	110	370	13 $\frac{3}{4}$ "	8	12	NAG
N 2	220	370	13 $\frac{3}{4}$ "	8	12	NATIVE
N 3	110	350	14 $\frac{1}{2}$ "	13	21	NECTAR
N 3	220	350	14 $\frac{1}{2}$ "	13	21	NEST

Also furnished for 250 volts, regular list price.

*The Cincinnati*



TYPES LN and BN



TYPE HN

## Ball-Bearing Sanding and Polishing Machines

Universal Motor for Direct or Alternating Current, 25 to 60 Cycles.

TYPE LN Sanding Machine is the ideal light-weight tool for the garage or service station. The right-angle drive construction assures easy and positive control, with no unnecessary fatigue.

TYPE BN Sanding Machine was designed primarily to meet the increasing demand of the automobile body and refinishing shops for a high-speed heavy duty tool.

TYPE HN Sanding and Polishing Machine is a flexible and efficient polishing and grinding device. Great labor-saver in auto body repair and paint shops, boat-building and repair shops for sanding hulls, etc., paper mills and other industrial plants for grinding, sanding and cleaning jobs of various kinds.

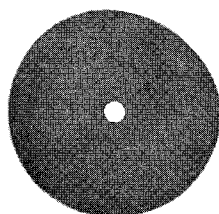
EQUIPMENT—1 flexible backing pad, 6 abrasive discs, 2 each, coarse, medium and fine grit;  
20 feet rubber-covered 3-wire cable and attachment plug.

### SPECIFICATIONS

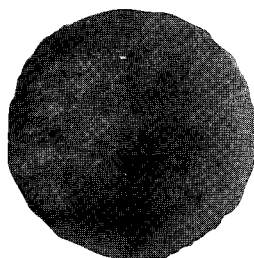
Type	Volts	Load Speed R. P. M.	Diameter Abrasive Disc	Diameter Flexible Backing Pad	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
LN	110	5000	7"	7"	9½	15	HADES
LN	220	5000	7"	7"	9½	15	HAUNCH
BN	110	5000	7"	7"	11	21	HABIT
BN	220	5000	7"	7"	11	21	HAIL
HN	110	3500	9¼"	8¾"	18½	30	HEIR
HN	220	3500	9¼"	8¾"	18½	30	HELVE

Also furnished for 250 volts at regular list price.

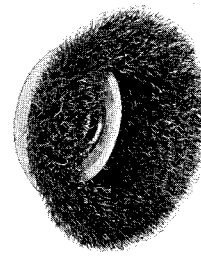
## Attachments for Sanding and Polishing Machines



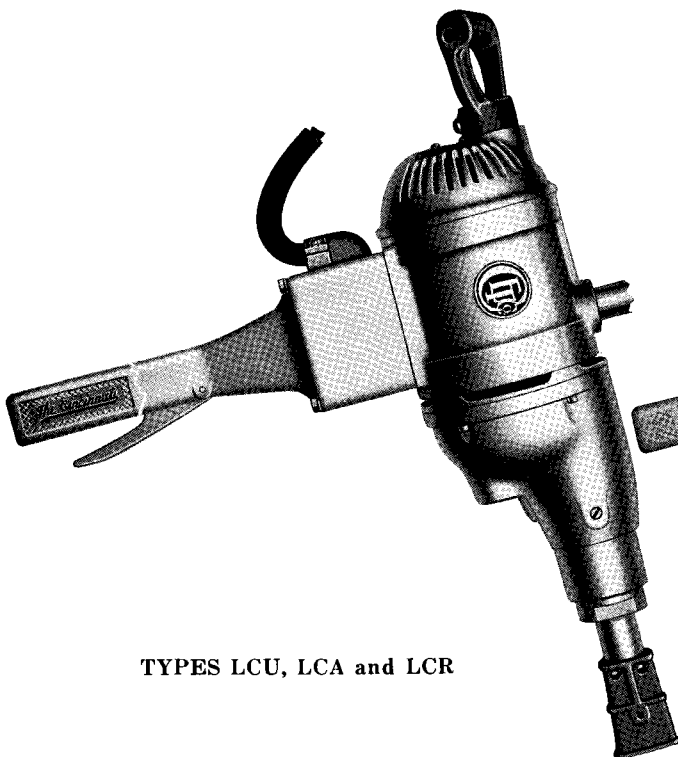
Abrasive disc for sanding or grinding.



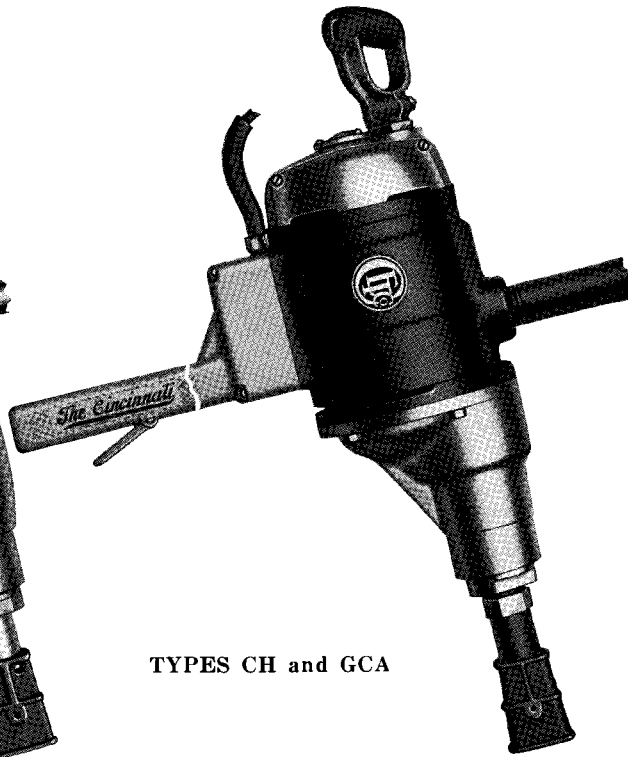
Lamb's wool bonnet for final buffing of lacquer. Fits over flexible pad.



Wire cup wheel for cleaning rust and scale.



TYPES LCU, LCA and LCR



TYPES CH and GCA

## "One-Man" Ball-Bearing Electric Coal Drills

A LIGHT-WEIGHT, powerful drill, suitable for operation by one man with or without the use of a mounting. This drill is adaptable for drilling in soft and free-drilling coal, and also in low-vein work where the working space is limited. Gears are of vanadium alloy steel, heat-treated and hardened. Armature shaft is mounted on ball bearings, with ball thrust bearing on chuck spindle to carry thrust load. Fully enclosed automatic self-releasing 2-pole switch is conveniently located in handle. A flat taper chuck is regularly provided for holding coal augers, but a square socket can be furnished if desired.

EQUIPMENT — 25 feet rubber-covered three-wire cable, attachment plug, ground clamp, coal auger socket, back handle and removable side handle. Breast-plate will be furnished instead of back handle, if desired.

## Heavy Duty Ball-Bearing Electric Coal Drills

A VERY powerful heavy duty drill, built to handle practically all shot hole drilling in both bituminous and anthracite coal; suitable for operation mounted or unmounted, by either one or two men. Gears are of vanadium alloy steel, heat-treated and hardened, and are mounted on ball bearings. The armature also runs on ball bearings, and a ball thrust bearing on the chuck spindle provides for end thrust. An automatic self-releasing 2-pole switch is conveniently located in one side handle. A flat taper chuck is regularly provided for holding coal augers, but a square socket can be furnished if desired.

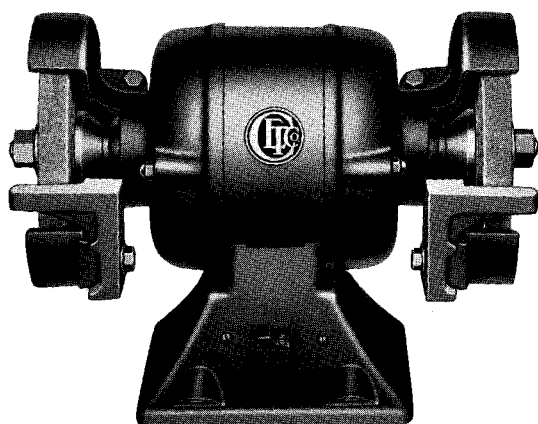
### DIRECT CURRENT SPECIFICATIONS

Type	Volts	No Load Speed, R. P. M.	Length, Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
LCU	115	330	23 1/4"	38	65	FETLOCK
LCU	250	330	23 1/2"	38	65	FIDDLE
LCR (Reversible)	115	330	23 1/2"	39 1/4"	65	FINALE
LCR	250	330	23 1/2"	39 1/2"	65	FALCON
CH	115	500	23 3/4"	48	85	FARRAD
CH	250	500	23 3/4"	48	85	FAUNA

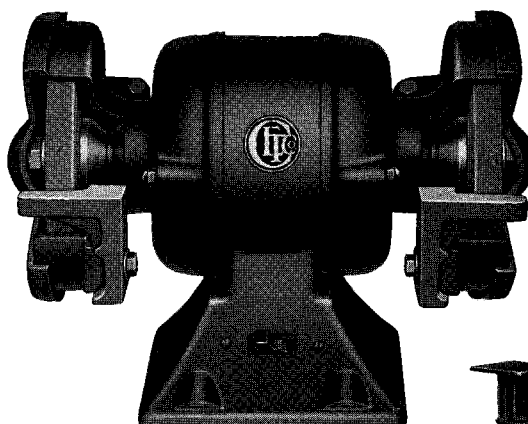
### ALTERNATING CURRENT SPECIFICATIONS

*LCA	220 V. 60 Cy., 3 Ph.	440	24"	45	65	FILLY
*LCA	440 V. 60 Cy., 3 Ph.	440	24"	45	65	FILM
GCA } Center }	220 V. 60 Cy., 3 Ph.	500	22 1/4"	65	95	FENDER
GCA } Drive }	440 V. 60 Cy., 3 Ph.	500	22 1/4"	65	95	FENCING

\*Can also be furnished for operation on 110 or 220 volts, single-phase, regular list price.  
Reversible switch for Type LCA, \$15.00 extra.



TYPE BEA



TYPE BBA

Pedestal for  
Types BEA and BBA  
Grinders



## 6-Inch Bench and Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**B**ALL-BEARING Grinders especially designed to meet the demand for practical and serviceable tools for use in garages, repair shops, tool-rooms, etc., for grinding small tools and light castings; also for polishing and buffing. Ball bearings are mounted in dust-proof housings in close proximity to the grinding wheels. The bearings are correctly locked to the shaft to provide end thrust and eliminate wear. A toggle switch is entirely enclosed in the base of the motor. For shatter-proof glass eye shields, see page 10.

**EQUIPMENT**—Two grinding wheels, wheel guards, grinding rests and rubber-covered cable with attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Wheel Size	Diameter of Shaft Between Flanges	Distance Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
†BEA—Bench	110-60-1	1/4	3450	6"x1 1/2"	1 1/2"	9 7/8"x 6"	6 1/4"x 8"	35	50	FINN
BBA—Bench	110-60-1	1/4	3450	6"x3 1/2"	1 1/2"	10 1/4"x 6"	6 3/4"x 9"	45	60	FAITH
*BBA—Bench	220-60-1	1/2	3450	6"x3 1/2"	1 1/2"	10 1/4"x 6"	6 3/4"x 9"	45	60	FATE
†PEA—Pedestal	110-60-1	1/4	3450	6"x1 1/2"	1 1/2"	9 7/8"x38"	16" x12"	150	210	FACULTY
PBA—Pedestal	110-60-1	1/4	3450	6"x3 1/2"	1 1/2"	10 1/4"x38"	16" x12"	160	220	SERVE
*PBA—Pedestal	220-60-1	1/2	3450	6"x3 1/2"	1 1/2"	10 1/4"x38"	16" x12"	160	220	SANDY

†Furnished for Alternating Current, 110 volts, 60 cycles, single phase only.

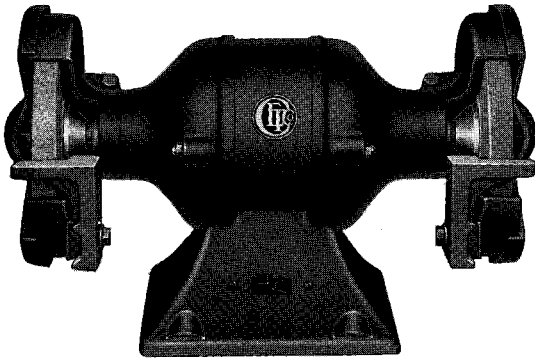
\*Can be furnished for 220 or 440 volts, 2 or 3 phase, regular list price.

Speed for 25 cycles, 1500 R.P.M.

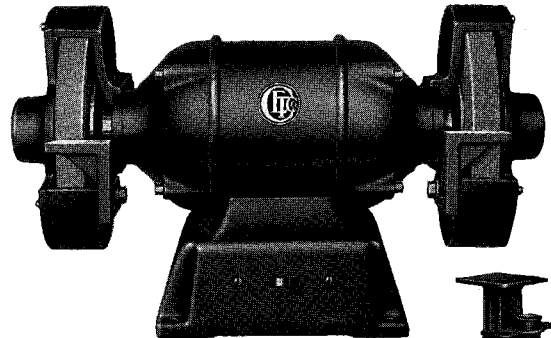
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Wheel Size	Diameter of Shaft Between Flanges	Distance Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BB—Bench	115	1/4	3400	6"x3 1/2"	1 1/2"	10 1/4"x 6"	6 3/4"x 9"	45	60	FATAL
BB—Bench	230	1/2	3400	6"x3 1/2"	1 1/2"	10 1/4"x 6"	6 3/4"x 9"	45	60	FAIR
PB—Pedestal	115	1/4	3400	6"x3 1/2"	1 1/2"	10 1/4"x38"	16" x12"	160	220	SPACE
PB—Pedestal	230	1/2	3400	6"x3 1/2"	1 1/2"	10 1/4"x38"	16" x12"	160	220	STORY

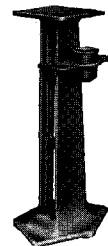


7-INCH GRINDER



8-INCH GRINDER

Pedestal  
for 7 and 8-inch  
Grinders



## 7 and 8-Inch Bench and Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**B**ALL-BEARING GRINDERS especially designed to meet the demand for practical and serviceable tools for use in garages, repair shops, tool rooms, etc., for grinding small tools and light castings; also for polishing and buffing. Ball bearings are mounted in dust-proof housings in closest proximity to grinding wheels. Fully enclosed safety wheel guards, with adjustable grinding rests. Bearings are correctly locked to the shaft to provide end thrust and eliminate shaft wear. Switch is entirely enclosed in the base of the motor. For shatter-proof glass eye shields, see page 10.

**EQUIPMENT**—Two grinding wheels, wheel guards, grinding rests and rubber-covered cable with attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Wheel Size	Diameter of Shaft Between Flanges	Distance Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BSA—Bench	110-60-1	$\frac{1}{2}$	3450	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 6 $\frac{1}{4}$ "	8 $\frac{5}{16}$ " x 10 $\frac{1}{4}$ "	56	77	FANG
*BSA—Bench	220-60-1	$\frac{1}{2}$	3450	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 6 $\frac{1}{4}$ "	8 $\frac{5}{16}$ " x 10 $\frac{1}{4}$ "	56	77	FAKIR
VHA—Bench	110-60-1	$\frac{1}{2}$	3450	8"x1"	$\frac{5}{8}$ "	14" x 7"	10"x9"	90	110	FEBRILE
*VHA—Bench	220-60-1	$\frac{1}{2}$	3450	8"x1"	$\frac{5}{8}$ "	14" x 7"	10"x9"	90	110	FECE
PSA—Peds'l	110-60-1	$\frac{1}{2}$	3450	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 38"	16"x12"	170	230	SCRUB
*PSA—Peds'l	220-60-1	$\frac{1}{2}$	3450	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 38"	16"x12"	170	230	SHORE
VPA—Peds'l	110-60-1	$\frac{1}{2}$	3450	8"x1"	$\frac{5}{8}$ "	14" x 38 $\frac{1}{2}$ "	16"x12"	205	265	FATLING
*VPA—Peds'l	220-60-1	$\frac{1}{2}$	3450	8"x1"	$\frac{5}{8}$ "	14" x 38 $\frac{1}{2}$ "	16"x12"	205	265	FARRIER

\*Can also be furnished for 220 or 440 volts, 2 or 3 phase, regular list price.

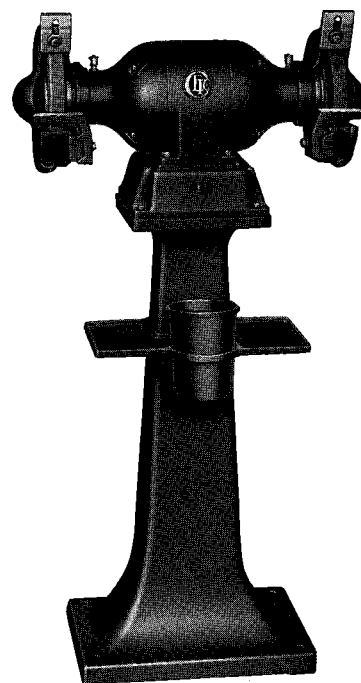
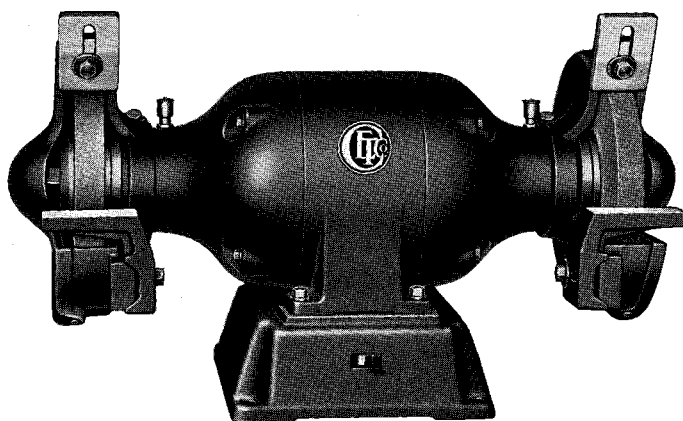
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Wheel Size	Diameter of Shaft Between Flanges	Distance Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BS—Bench	115	$\frac{1}{2}$	3000	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 6 $\frac{1}{4}$ "	8 $\frac{5}{16}$ " x 10 $\frac{1}{4}$ "	56	77	FAVOR
BS—Bench	230	$\frac{1}{2}$	3000	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 6 $\frac{1}{4}$ "	8 $\frac{5}{16}$ " x 10 $\frac{1}{4}$ "	56	77	FANE
PS—Peds'l	115	$\frac{1}{2}$	3000	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 38"	16" x 12"	170	230	STALL
PS—Peds'l	230	$\frac{1}{2}$	3000	7"x1"	$\frac{5}{8}$ "	13 $\frac{3}{4}$ " x 38"	16" x 12"	170	230	STAMP

8-inch Grinder furnished for Alternating Current only.



8 and 10-inch

## Bench and Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**P**OWERFUL Ball-Bearing Grinders with repulsion induction motors, which are safely recommended for grinding of all kinds and for general purpose buffing and polishing. Fully enclosed safety wheel guards can be rotated for grinding in any position on wheel. Grinding rests and spark shields are adjustable to wear of wheels. Ball bearings are mounted in dust-proof housings in closest proximity to grinding wheels. They are correctly locked to the shaft to provide end thrust and eliminate shaft wear. Two-pole starting switch is entirely enclosed in the base of the motor. Shatter-proof glass eye shields furnished as extra, see page 10.

**EQUIPMENT**—Two grinding wheels, wheel guards, grinding rests and rubber-covered cable with attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Wheel Size	Diam. Shaft Bet. Flanges	Distance Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BHA-Bench	110-60-1	1/2	3400	8" x 1"	5/8"	18" x 7 1/4"	10" x 9"	120	160	FLORAL
*BHA-Bench	220-60-1	1/2	3400	8" x 1"	5/8"	18" x 7 1/4"	10" x 9"	120	160	FLORET
BLA-Bench	110-60-1	1	1750	10" x 1"	3/4"	18" x 7 1/4"	10" x 9"	145	190	FAGIN
*BLA-Bench	220-60-1	1	1750	10" x 1"	3/4"	18" x 7 1/4"	10" x 9"	145	190	FAMA
FHA-Peds'l	110-60-1	1/2	3400	8" x 1"	5/8"	18" x 39"	16" x 12"	210	315	HANSON
*FHA-Peds'l	220-60-1	1/2	3400	8" x 1"	5/8"	18" x 39"	16" x 12"	210	315	HANDY
FLA-Peds'l	110-60-1	1	1750	10" x 1"	3/4"	18" x 39"	16" x 12"	260	330	FANAR
*FLA-Peds'l	220-60-1	1	1750	10" x 1"	3/4"	18" x 39"	16" x 12"	260	330	FANON

\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

Speed for 25 cycles, 1500 R.P.M.

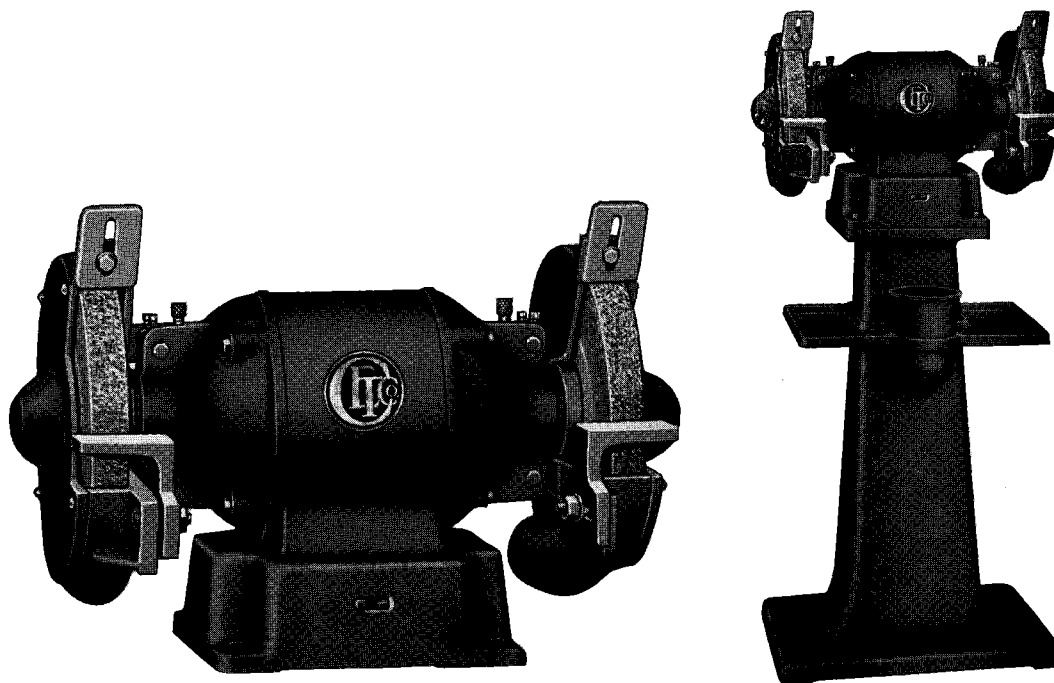
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

BH-Bench	115	1/2	3400	8" x 1"	5/8"	18" x 7 1/4"	10" x 9"	120	160	FLASH
BH-Bench	230	1/2	3400	8" x 1"	5/8"	18" x 7 1/4"	10" x 9"	120	160	FLEDGE
BL-Bench	115	1	1750	10" x 1"	3/4"	18" x 7 1/4"	10" x 9"	150	190	FABRE
BL-Bench	230	1	1750	10" x 1"	3/4"	18" x 7 1/4"	10" x 9"	150	190	FADGE
FH-Pedestal	115	1/2	3400	8" x 1"	5/8"	18" x 39"	16" x 12"	210	315	GRANNY
FH-Pedestal	230	1/2	3400	8" x 1"	5/8"	18" x 39"	16" x 12"	210	315	GLASS
FL-Pedestal	115	1	1750	10" x 1"	3/4"	18" x 39"	16" x 12"	260	330	FAUM
FL-Pedestal	230	1	1750	10" x 1"	3/4"	18" x 39"	16" x 12"	260	330	FAIK



THE CINCINNATI ELECTRICAL TOOL CO.



## 10-Inch Bench and Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts — If Alternating Current, Give Cycles and Phase

**HEAVY-DUTY GRINDER**, with repulsion induction motor, designed to take care of heavy grinding of all kinds and for general purpose buffing and polishing. Ball bearings are mounted in dust-proof housings in closest proximity to grinding wheels. Spindle is of nickel steel and extra heavy. Wheel guards are safety type, equipped with spark breakers, end covers, exhaust connections, and are adjustable to wear of wheels. Grinding rests are also adjustable. Two-pole starting switch is entirely enclosed in the base of the motor. For shatter-proof glass eye shields, see page 10.

**EQUIPMENT**—Two grinding wheels, wheel guards, grinding rests and rubber-covered cable with attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Wheel Size	Diameter Shaft Bet. Flanges	Dist. Bet. Wheels and Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BOA Bench	110-60-1	1	1750	10" x 1 1/4"	3/4"	17" x 8"	10" x 10"	150	200	FLUID FLUKE HAMMER HAWSER
•BOA Bench	220-60-1	1	1750	10" x 1 1/4"	3/4"	17" x 8"	10" x 10"	150	200	
FOA Peds'l	110-60-1	1	1750	10" x 1 1/4"	3/4"	17" x 39"	20" x 15"	310	430	
•FOA Peds'l	220-60-1	1	1750	10" x 1 1/4"	3/4"	17" x 39"	20" x 15"	310	430	

\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

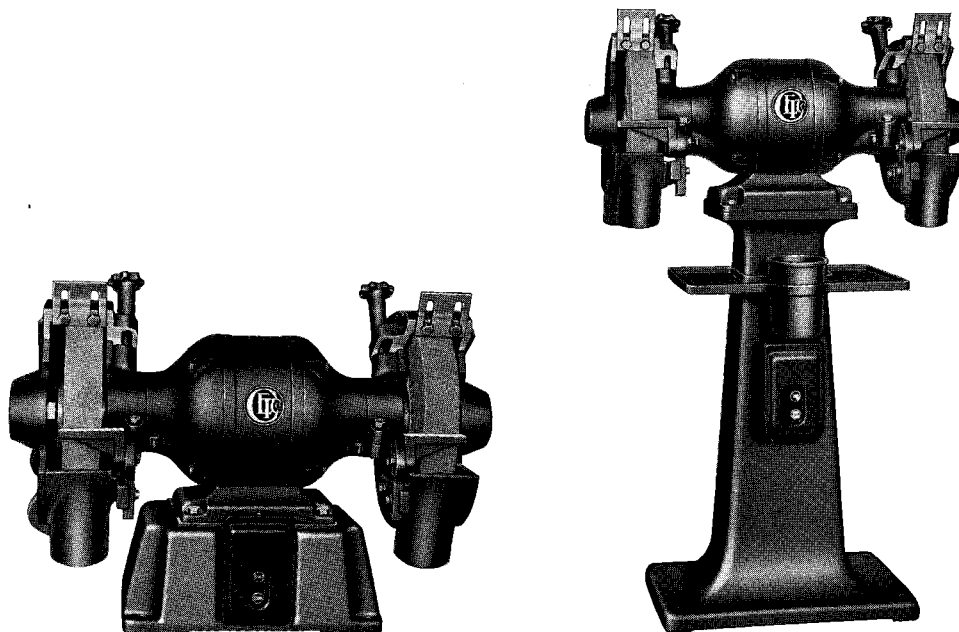
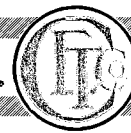
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

BO Bench	115	1	2000	10" x 1 1/4"	3/4"	17" x 8"	10" x 10"	165	215	FLATTER FLEXIBLE GLAZE GRAND
BO Bench	230	1	2000	10" x 1 1/4"	3/4"	17" x 8"	10" x 10"	165	215	
FO Peds'l	115	1	2000	10" x 1 1/4"	3/4"	17" x 39"	20" x 15"	325	445	
FO Peds'l	230	1	2000	10" x 1 1/4"	3/4"	17" x 39"	20" x 15"	325	445	

*The Cincinnati*



## 12 and 14-Inch Bench and Pedestal Grinders

ALTERNATING CURRENT ONLY

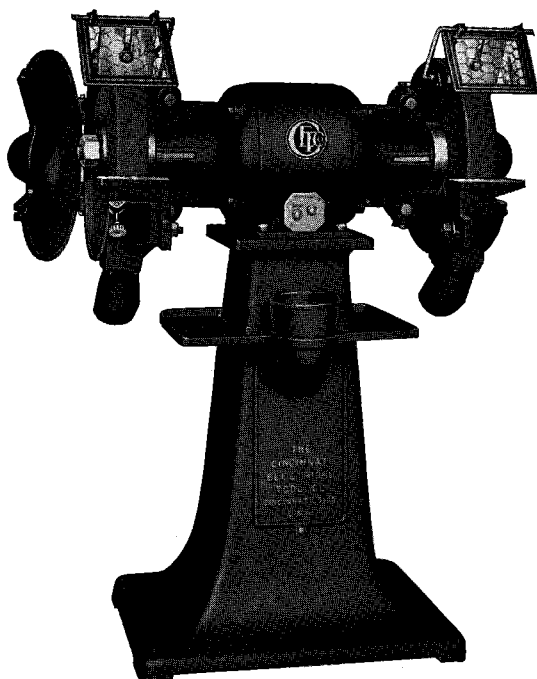
Order by Type and Volts, Giving Cycles and Phase.

**G**ENERAL Utility Ball-Bearing Bench and Pedestal Grinders, recommended for general-purpose grinding of all kinds. Wheel guards are fully enclosed safety type, equipped with hinged end covers, spark breakers, exhaust connections, and are adjustable to the wear of the grinding wheels. Ball bearings are mounted in dust-proof housings and are correctly locked to shaft to prevent wear. Magnetic starter, with overload and no voltage protection is standard equipment. For shatter-proof glass eye shields see page 10.

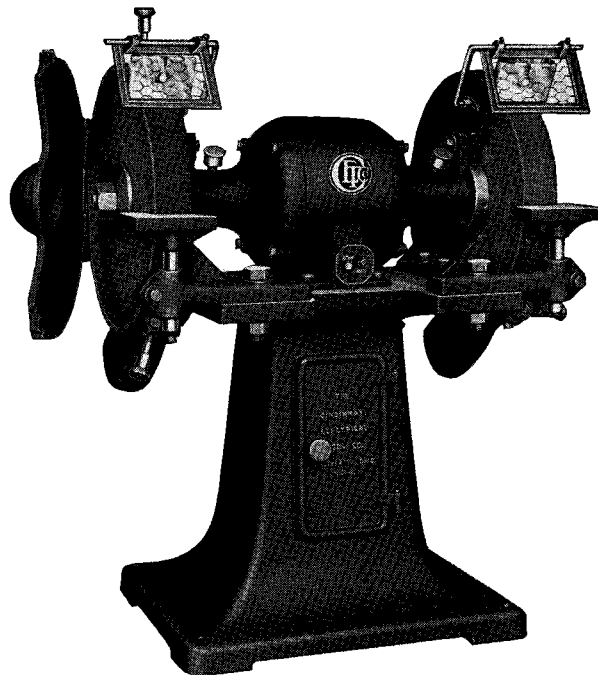
**EQUIPMENT** — Two grinding wheels, wheel guards and grinding rests.

Type	Volts	H. P.	Load Speed R. P. M.	Wheel Size	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
BTA—Bench	220-60-3	2	1750	12"x2"	1 1/4"	20 1/2"	14"	17 1/2"x16"	350	425	HACK
BTA—Bench	440-60-3	2	1750	12"x2"	1 1/4"	20 1/2"	14"	17 1/2"x16"	350	425	HAFT
FTA—Pedestal	220-60-3	2	1750	12"x2"	1 1/4"	20 1/2"	39"	20"x15"	450	600	HECTOR
FTA—Pedestal	440-60-3	2	1750	12"x2"	1 1/4"	20 1/2"	39"	20"x15"	450	600	HEATH
VCA—Bench	220-60-3	3	1750	14"x2 1/2"	1 1/4"	21 1/2"	14"	17 1/2"x16"	450	525	HARPOON
VCA—Bench	440-60-3	3	1750	14"x2 1/2"	1 1/4"	21 1/2"	14"	17 1/2"x16"	450	525	HARNES
FCA—Pedestal	220-60-3	3	1750	14"x2 1/2"	1 1/4"	21 1/2"	39"	20"x15"	550	675	HELMET
FCA—Pedestal	440-60-3	3	1750	14"x2 1/2"	1 1/4"	21 1/2"	39"	20"x15"	550	675	HEAP

For 2 phase and odd cycles, mention after code word.  
 Speed for 25 cycles, 1500 R.P.M.  
 For other than 50 or 60 cycles, increase price 20%.  
 For single phase, increase price 20%.



12 and 14-inch



18-inch

## Ball-Bearing Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**H**EAVY-DUTY GRINDERS, especially designed and built for continuous production work. Spindle is of nickel steel, extra heavy, and provided with shaft locking device for changing wheels. Ball bearings are mounted in dust-proof housings in closest proximity to grinding wheels, and are correctly locked to the shaft to provide end thrust and eliminate wear. Wheel guards are adjustable, safety type and equipped with hinged doors, exhaust connections, spark breakers and adjustable shatter-proof glass eye shields. Grinding rests are also adjustable. Magnetic starter with overload and no voltage protection is standard equipment. Starter is mounted in the pedestal of grinder, push-button station on the motor frame.

Grinding Wheels are not regularly furnished, but can be supplied on order.  
For boiler plate wheel guards, increase price 15%.

### ALTERNATING CURRENT SPECIFICATIONS

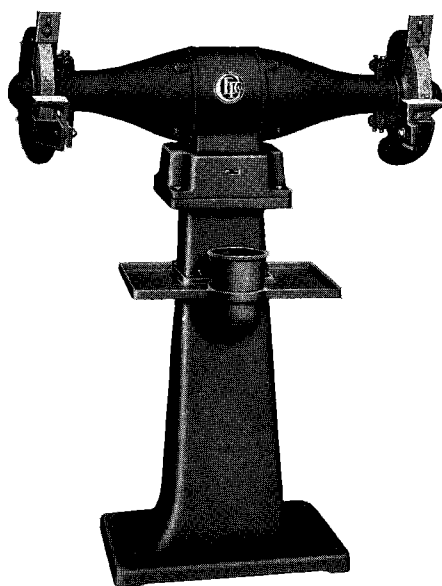
Type	Volts	H. P.	Load Speed R.P.M.	Wheel Size	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Weight, Less Wheels	Shipping Weight, Pounds	Code Word
HTA	220-60-3	2	1750	12"x2"	1 1/4"	22 1/2"	37 1/2"	25"x20"	500	650	BULLOCK
HTA	440-60-3	2	1750	12"x2"	1 1/4"	22 1/2"	37 1/2"	25"x20"	500	650	BULLY
HCA	220-60-3	3	1750	14"x2 1/2"	1 1/4"	22 1/2"	38"	25"x20"	550	710	BUNDLE
HCA	440-60-3	3	1750	14"x2 1/2"	1 1/4"	22 1/2"	38"	25"x20"	550	710	BUNG
HEA	220-60-3	5	1750	14"x3"	1 1/4"	24 1/2"	38"	25"x20"	600	760	BABER
HEA	440-60-3	5	1750	14"x3"	1 1/4"	24 1/2"	38"	25"x20"	600	760	BABOO
FFA	220-60-3	5	1160	18"x3"	1 1/2"	31"	35"	28"x23"	1085	1240	HARBOR
FFA	440-60-3	5	1160	18"x3"	1 1/2"	31"	35"	28"x23"	1085	1240	HAVOC

Made in 2 or 3 phase only. For 2 phase, odd cycles, or 550 volts, mention after code word.  
Speed for 25 cycles, 1500 R.P.M.

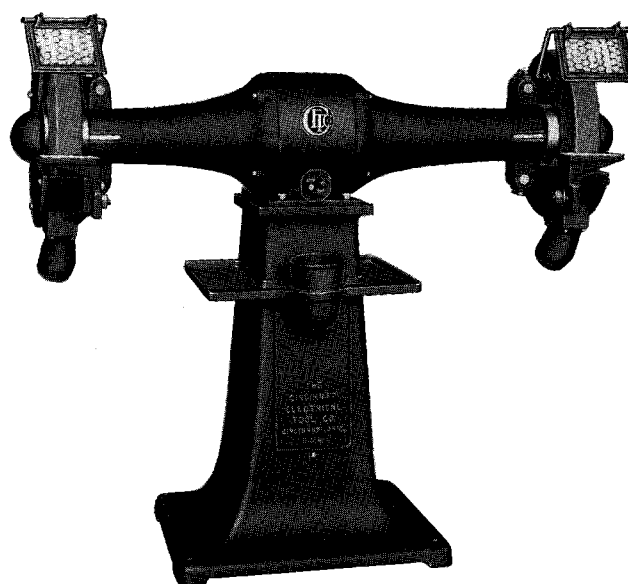
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

HT	115	2	1750	12"x2"	1 1/4"	22 1/2"	38"	25"x20"	550	700	BULLET
HT	230	2	1750	12"x2"	1 1/4"	22 1/2"	38"	25"x20"	550	700	BULLION
HC	115	3	1750	14"x2 1/2"	1 1/4"	23 1/2"	39"	25"x20"	600	760	BULWARK
HC	230	3	1750	14"x2 1/2"	1 1/4"	23 1/2"	39"	25"x20"	600	760	BUMPER
HE	115	5	1750	14"x3"	1 1/4"	24 1/2"	39"	25"x20"	730	890	BADEN
HE	230	5	1750	14"x3"	1 1/4"	24 1/2"	39"	25"x20"	730	890	BAIRN
FF	115	5	1150	18"x3"	1 1/2"	32 1/2"	35"	28"x23"	1060	1225	HAMLET
FF	230	5	1150	18"x3"	1 1/2"	32 1/2"	35"	28"x23"	1060	1225	HAMPER



8 and 10-inch



12 and 14-inch

## Wide Type Ball-Bearing Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**HEAVY-DUTY GRINDERS**, especially adapted for continuous production work. The wide spread between wheels allows maximum accessibility in grinding long and odd-shaped pieces. Spindle is of nickel steel and provided with shaft locking device for changing wheels. Four deep-groove ball bearings are mounted in dust-proof housings and correctly locked to the shaft to provide end thrust and eliminate wear. Wheel guards are of fully enclosed safety type, adjustable to wear of wheels. Grinding rests are also adjustable. Shatter-proof glass eye shields are furnished as standard equipment on 2, 3 and 5 H.P. Grinders only. For eye shields for ½ and 1 H. P. Machines, see page 10.

½ and 1 H.P. Grinders furnished with repulsion induction motor for single-phase and two-pole toggle switch.

2, 3 and 5 H.P. Grinders have magnetic starters with overload and no voltage protection and push-button control.

Grinding Wheels are not regularly furnished with 2, 3 or 5 H.P. Grinders, but can be supplied on order. For boiler plate wheel guards, increase price 15%.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Wheel Size	Diam. Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
WAA	110-60-1	½	3400	8" x 1"	5/8"	29½"	38"	16" x 12"	220	340	WAD
†WAA	220-60-1	½	3400	8" x 1"	5/8"	29½"	38"	16" x 12"	220	340	WAG
WBA	110-60-1	1	1750	10" x 1½"	3/4"	31"	39"	20" x 15"	350	500	WALK
†WBA	220-60-1	1	1750	10" x 1½"	3/4"	31"	39"	20" x 15"	350	500	WANE
*WSA	220-60-3	2	1750	12" x 2"	1½"	38"	37½"	25" x 20"	550	700	WADE
*WSA	440-60-3	2	1750	12" x 2"	1½"	38"	37½"	25" x 20"	550	700	WAFER
*WCA	220-60-3	3	1750	14" x 2½"	1½"	38"	38"	25" x 20"	600	750	WAIL
*WCA	440-60-3	3	1750	14" x 2½"	1½"	38"	38"	25" x 20"	600	750	WAFI
*WFA	220-60-3	5	1750	14" x 3"	1½"	42"	38½"	28" x 23"	650	815	WAIN
*WFA	440-60-3	5	1750	14" x 3"	1½"	42"	38½"	28" x 23"	650	815	WAKE

†Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

\*Made in 2 or 3 phase only. — For 2 phase, odd cycles, or 550 volts, mention after code word. Speed for 25 cycles, 1500 R.P.M.

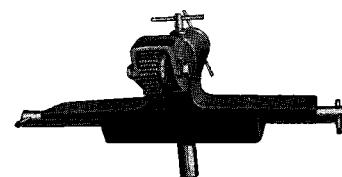
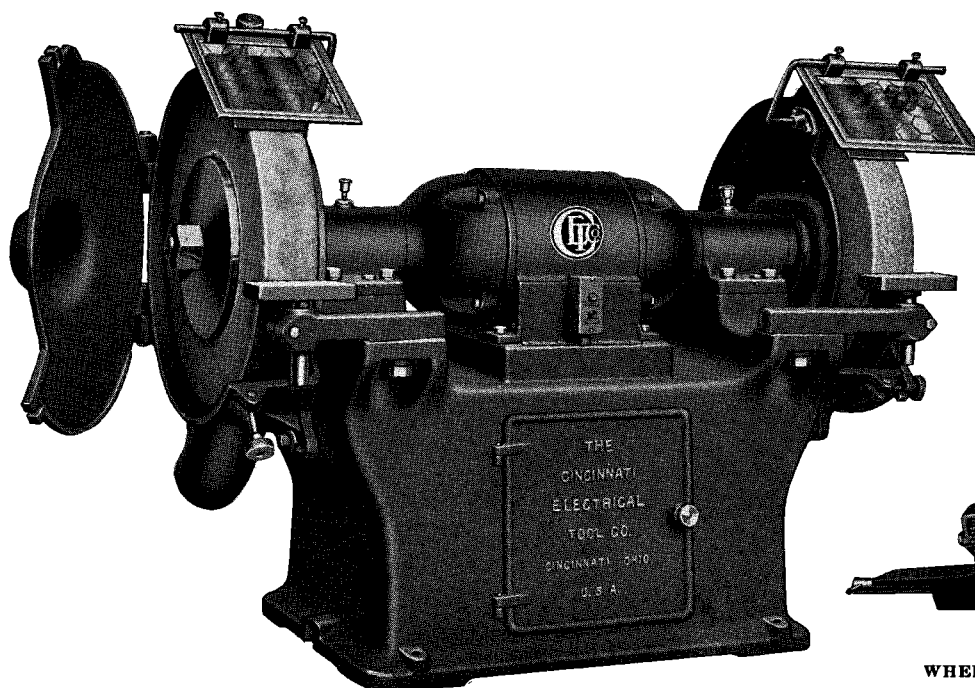
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

WA	115	½	3400	8" x 1"	5/8"	29½"	38"	16" x 12"	220	340	WARD
WA	230	½	3400	8" x 1"	5/8"	29½"	38"	16" x 12"	220	340	WARE
WB	115	1	1750	10" x 1½"	3/4"	31"	39"	20" x 15"	350	500	WARN
WB	230	1	1750	10" x 1½"	3/4"	31"	39"	20" x 15"	350	500	WART
WS	115	2	1750	12" x 2"	1½"	40"	37½"	25" x 20"	610	760	WALL
WS	230	2	1750	12" x 2"	1½"	40"	37½"	25" x 20"	610	760	WASP
WC	115	3	1750	14" x 2½"	1½"	40"	38"	25" x 20"	650	800	WHELEK
WC	230	3	1750	14" x 2½"	1½"	40"	38"	25" x 20"	650	800	WHIG
WF	115	5	1750	14" x 3"	1½"	42"	35"	28" x 23"	850	1025	WHIST
WF	230	5	1750	14" x 3"	1½"	42"	35"	28" x 23"	850	1025	WOLF



THE CINCINNATI ELECTRICAL TOOL CO.



WHEEL DRESSER

18, 20 and 24-inch

## Roller-Bearing Pedestal Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**H**EAVY-DUTY Roller-Bearing Grinders, built for continuous service. Nickel steel one-piece shaft is equipped with four Timken adjustable roller bearings, running in oil. Wheel guards are adjustable to wear of wheels and are equipped with exhaust connections, hinged doors, spark breakers and shatter-proof glass eye shields. Grinding rests are also adjustable. A spindle locking device is provided to facilitate changing of wheels. Magnetic starter with overload and no voltage protection is standard equipment. Starter is mounted in the base of grinder, push-button station on the motor frame.

Can be furnished with flanges for 10" or 12" bore grinding wheels, if desired, \$50.00 extra.  
Grinding wheels not regularly furnished, supplied on order.  
For boiler plate wheel guards, increase price 15%.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R.P.M.	Wheel Size	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Weight, Less Wheels Pounds	Shipping Weight, Pounds	Code Word
CFA	220-60-3	5	1150	18"x3"	2"	42"	35"	34"x25½"	1575	1740	CABAL
CFA	440-60-3	5	1150	18"x3"	2"	42"	35"	34"x25½"	1575	1740	CAJOLE
HGA	220-60-3	7½	1150*	20"x3"	2"	42"	35"	34"x25½"	1650	1835	CASERN
HGA	440-60-3	7½	1150*	20"x3"	2"	42"	35"	34"x25½"	1650	1835	CACTUS
JSA	220-60-3	7½	850	24"x4"	2½"	52½"	34"	42½"x30"	2375	2550	CALYX
JSA	440-60-3	7½	850	24"x4"	2½"	52½"	34"	42½"x30"	2375	2550	CAMLET
JTA	220-60-3	10	850	24"x4"	2½"	52½"	34"	42½"x30"	2425	2610	CANARD
JTA	440-60-3	10	850	24"x4"	2½"	52½"	34"	42½"x30"	2425	2610	CANCAN

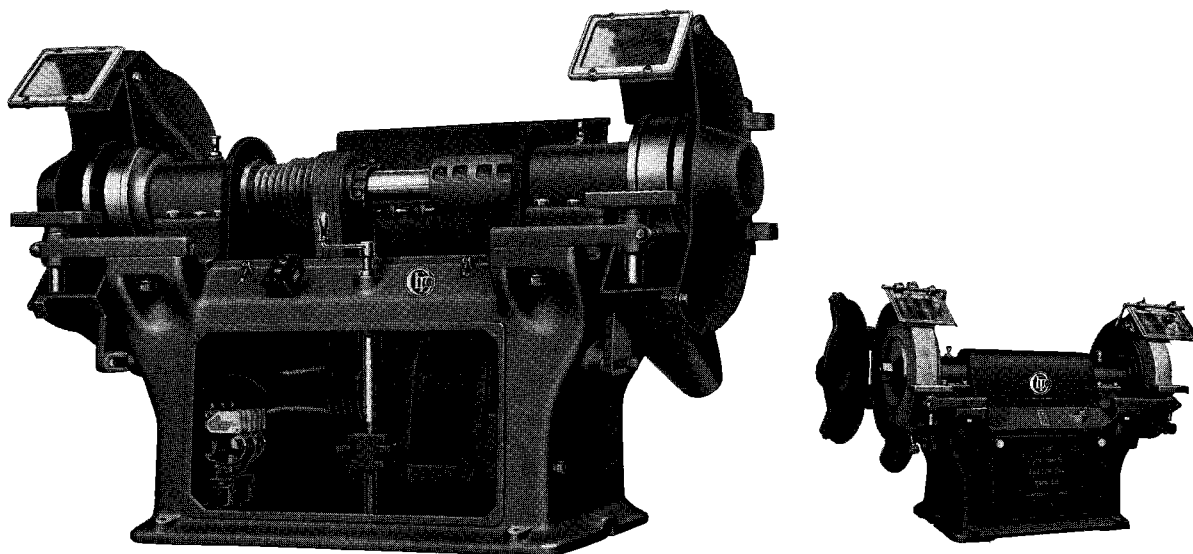
Furnished in 2 or 3 phase only. For 2 phase, odd cycles, or 550 volts, mention after code word.  
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

CF	115	5	1160	18"x3"	2"	42"	35"	34"x25½"	1700	1865	CANELLA
CF	230	5	1160	18"x3"	2"	42"	35"	34"x25½"	1700	1865	CANTO
HG	115	7½	1160*	20"x3"	2"	42"	35"	34"x25½"	1800	1975	CAIRN
HG	230	7½	1160*	20"x3"	2"	42"	35"	34"x25½"	1800	1975	CARDER
JS	115	7½	850	24"x4"	2½"	52½"	34"	42½"x30"	2500	2700	CAPIN
JS	230	7½	850	24"x4"	2½"	52½"	34"	42½"x30"	2500	2700	CAPIN
JT	115	10	850	24"x4"	2½"	52½"	34"	42½"x30"	2625	2825	CAPON
JT	230	10	850	24"x4"	2½"	52½"	34"	42½"x30"	2625	2825	CAPRIC

\*Also furnished at speed of 1750 R.P.M. for resinoid bonded wheels, at regular list price, but in which case 10" bore flanges are recommended, at \$50.00 pair extra.

*The Cincinnati*



18, 20 and 24-inch

## Three Speed Snagging Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

A SMOOTH, quiet-running heavy duty Variable Speed Vee Belt Snagging Grinder, designed for high-speed production grinding. No noise—no vibration—no back lash—no chatter, as in gear-driven snagging grinders. Three-speed changes are provided to maintain efficient peripheral speeds on either vitrified or high-speed grinding wheels for the entire life of the wheels. (See table below.) In changing the spindle speed, it is but necessary to raise the motor, releasing the tension on the Vee belts, and move the three-speed sheave on the spindle into the next position by means of a rack and pinion.

A positive speed control prevents over-speeding as well as under-speeding of the wheels, insuring on one hand maximum production at all times, and on the other perfect protection to the operator.

Nickel steel shaft—supported by four heavy duty sealed type ball bearings, running in oil, in dust-proof housings. A gauge is provided to show the proper oil level, as well as a conveniently located drain plug for oil renewal.

Wheel guards are of boiler plate, adjustable, with exhaust connections, and have hinged doors, spark breakers and shatter-proof glass eye shields. Grinding rests are also adjustable. A spindle locking device is provided to facilitate changing of wheels.

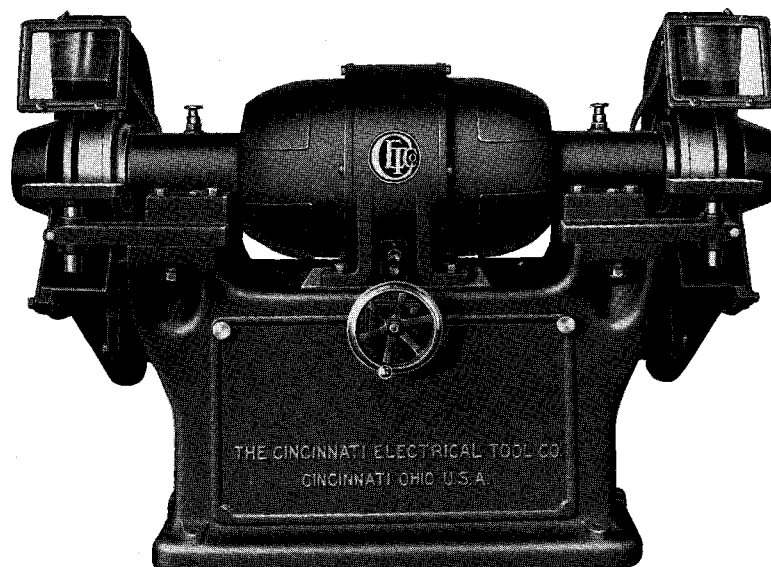
Magnetic starter with overload and no voltage protection is standard equipment. Starter is mounted in the base of grinder, push-button station on the motor frame.

Grinding wheels not regularly furnished, but supplied on order.

### SPECIFICATIONS

Type	Volts	H.P.	Wheel Size	Spindle Speeds for Vitrified Wheels	Spindle Speeds for High Speed Wheels	Diam. Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Weight, Less Wheels Pounds	Shipping Weight, Pounds	Code Word
BAA	220-60-3	5	*18"x3"x10"	1200-1400-	2000-2300-	2 1/4"	52 5/8"	34"	42 5/8"x30"	1975	2150	CACAO
BAA	440-60-3	5	*18"x3"x10"	1650	2700	2 1/4"	52 5/8"	34"	42 5/8"x30"	1975	2150	CADE
BCA	220-60-3	7 1/2	*20"x3"x10"	1100-1400-	1800-2150-	2 1/4"	52 5/8"	34"	42 5/8"x30"	2075	2225	CADGE
BCA	440-60-3	7 1/2	*20"x3"x10"	1700	2550	2 1/4"	52 5/8"	34"	42 5/8"x30"	2075	2225	CALM
BGA	220-60-3	10	*24"x3"x12"	900-1200-	1550-1800-	2 1/4"	52 5/8"	34"	42 5/8"x30"	2500	2700	CANOE
BGA	440-60-3	10	*24"x3"x12"	1400	2100	2 1/4"	52 5/8"	34"	42 5/8"x30"	2500	2700	CANTER

Furnished in 2 or 3 phase only. For 2 phase or 550 volts, mention after code word.  
Can also be furnished for Direct Current and odd cycles Alternating Current; prices on application.  
\*When ordered for vitrified wheels, flanges for 2 1/4" bore wheels are regularly supplied, unless otherwise specified.



18, 20 and 24-inch

## Variable Speed Snagging Grinders

DIRECT CURRENT ONLY

For Alternating Current Grinders, see page 23

**H**EAVY-DUTY Variable Speed Grinders, suitable for use on the heaviest production grinding, where high efficiency and low wheel costs are predominating factors.

The correct peripheral speed is maintained throughout the entire life of the grinding wheels, by means of a speed control which operates in conjunction with the spark breakers, the movement of which regulates the speed of the motor. The movement of the spark breakers is accomplished by means of a hand-wheel conveniently located on the front of the pedestal, and as the movement of both spark breakers is uniform, the peripheral speed is governed by the diameter of the larger wheel, positively preventing over-speeding of the grinding wheels. A spindle locking device is furnished to facilitate changing of wheels.

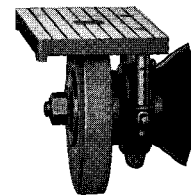
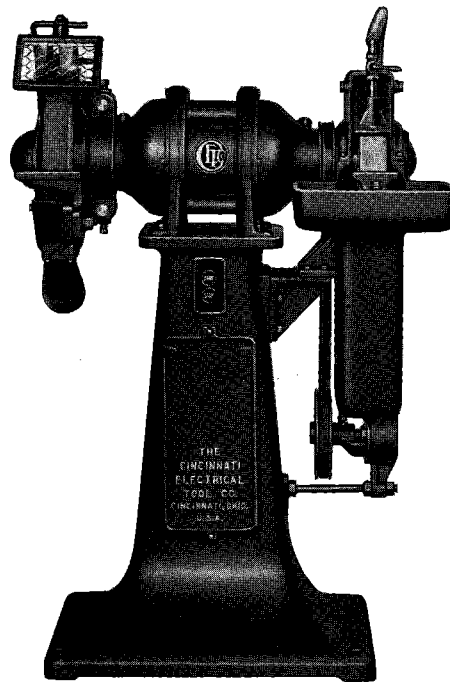
The spindle is of nickel steel, supported by four heavy-duty sealed-type ball bearings, running in oil, in dust-proof chambers. A gauge is provided to show the proper oil level, as well as a conveniently located drain plug for oil renewal.

Wheel guards are of boiler plate, with exhaust connections, spark breakers and shatter-proof glass eye shields.

A resistance type starter with overload and no voltage protection is mounted in the pedestal, with push-button station on the front of same. A field failure relay is provided, to ensure safety in event of such an occurrence.

Grinding wheels not regularly furnished, but supplied on order.

Type	Volts	H. P.	Wheel Size	Speeds Vitrified Wheels	Speeds High Speed Wheels	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Weight, Less Wheels Pounds	Shipping Weight, Pounds	Code Word
VCF	115	5	18x3x10	1200 to 1600	2000 to 2700	2"	42"	35"	34" x25½"	1750	1925	ZEALOT
VCF	230	5	18x3x10	1200 to 1600	2000 to 2700	2"	42"	35"	34" x25½"	1750	1925	ZENITH
VJS	115	7½	20x3x10	1200 to 1600	1800 to 2550	2"	52½"	34"	42½" x30"	2550	2750	ZERO
VJS	230	7½	20x3x10	1200 to 1600	1800 to 2550	2"	52½"	34"	42½" x30"	2550	2750	ZODIAC
VJT	115	10	24x3x12	900 to 1300	1550 to 2100	2¼"	52½"	34"	42½" x30"	2675	2875	ZOO
VJT	230	10	24x3x12	900 to 1300	1550 to 2100	2¼"	52½"	34"	42½" x30"	2675	2875	ZONE
VJW	115	15	24x4x12	High Speed	1550 to 2100	2¼"	52½"	34"	42½" x30"	2800	3000	ZOUNDS
VJW	230	15	24x4x12	Wheels only	1550 to 2100	2¼"	52½"	34"	42½" x30"	2800	3000	ZEPHYR



Surface Grinding Attachment

12-inch

## Combination Wet and Dry Grinder

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, give Cycles and Phase

**H** EAVY DUTY Combination Wet and Dry Grinder especially designed and built for continuous production work. Wet grinding side has a special hood, splash bowl, water reservoir with settling chamber, adjustable nozzle, valve and centrifugal pump. The pump is driven by a belt from the pulley on the wheel shaft and is so arranged that the bearings are not under water. The splash bowl and reservoir are of one piece and have a capacity of 2½ gallons or more. Spindle is of nickel steel and extra heavy. Ball bearings are mounted in dust-proof housings and correctly locked to the shaft to provide end thrust and eliminate wear. Wheel guard on dry grinding side is safety type, with hinged door, exhaust connection, spark breaker and adjustable shatter-proof eye shield. Tool rests are adjustable. A spindle locking device is provided to facilitate changing of wheels. Magnetic starter with overload and no voltage protection is standard equipment. Starter is mounted in the base of grinder, push-button station on the motor frame.

Grinding wheels are not regularly furnished, but can be supplied on order.  
Surface Grinding Attachment for dry side can be furnished if desired. Price \$45.00.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R.P.M.	Wheel Size	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Weight, Less Wheels Pounds	Shipping Weight, Pounds	Code Word
WGA	220-60-3	3	1750	12" x 2"	1¼"	22¾"	37½"	25"x20"	620	760	TABBY
WGA	440-60-3	3	1750	12" x 2"	1¼"	22¾"	37½"	25"x20"	620	760	TABOO

Made in 2 or 3 phase only. For 2 phase, odd cycles, or 550 volts, mention after code word.

Speed for 25 cycles, 1500 R.P.M.

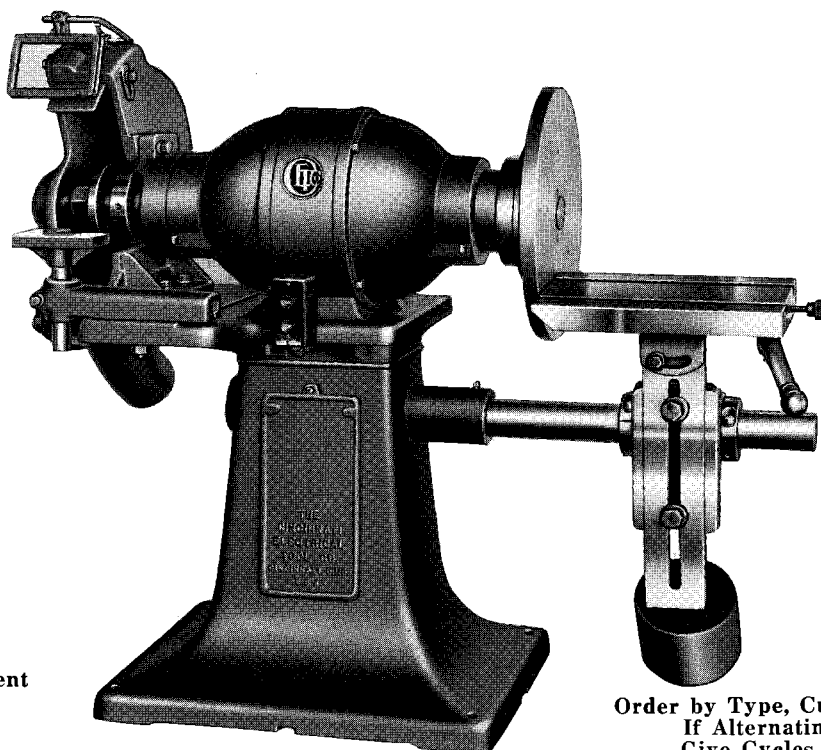
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

WG	115	3	1750	12" x 2"	1¼"	22¾"	38"	25"x20"	680	810	TALE
WG	230	3	1750	12" x 2"	1¼"	22¾"	38"	25"x20"	680	810	TALUS



# THE CINCINNATI ELECTRICAL TOOL CO.



Alternating Current  
Direct Current

Order by Type, Current and Volts.  
If Alternating Current,  
Give Cycles and Phase.

## Combination Single End Disc Grinders

THE CINCINNATI Combination Single End Disc Grinders are ideally suited for use in plants which do not have enough disc grinding to justify the investment in a single-purpose grinder. The grinding wheel may be used for grinding castings or tools, greatly increasing the general utility of the machine. The spindle is of nickel steel, mounted on extra large ball bearings, with special provision for both radial as well as thrust loads. The disc is of high-grade steel, accurately machined and balanced to ensure running true. A table with hand-lever feed is regularly furnished, but a plain table without feed can be supplied if desired—price on application. The standard disc may be had properly drilled for mounting steel-back abrasive discs, at no additional charge; also arranged to carry ring wheel chucks—price on application. If disc press for glueing abrasive disc to steel disc is required, see page 10. The wheel guard on the grinding wheel side is fully enclosed and adjustable to the wear of the wheel. A shatter-proof glass eye shield is furnished as standard equipment on grinders over 1 H.P.; for eye-shield price for ½ and 1 H.P. grinders, see page 10. ½ and 1 H.P. grinders are furnished with a two-pole toggle switch mounted in the base; grinders 2 H.P. and over with magnetic starters with overload and no voltage protection mounted in the pedestal, with push-button station on the motor frame. Grinding wheel furnished as standard equipment on ½ and 1 H.P. grinders only; can be supplied on machines 2 H.P. and over on order.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	HP	Load Speed RPM	Wheel Size	Disc Size	Size of Table	Diam. Shaft Bet. Flanges	Rocker Shaft Diam.	Horiz. Adj. of Table on Rocker Shaft	Vert. Adj. of Table	Hand Lever Feed	Lgth. Overall	Height Floor to Center of Spindle	Size Base at Bottom	Net Wght. Lbs.	Ship. Wght. Lbs.	Code Word
FHAC	110-60-1	1/2	3450	8x1"	7"	6x10"	5 5/8"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	34 1/2"	39"	16x12"	305	395	DALE
†FHAC	220-60-1	1/2	3450	8x1"	7"	6x10"	5 5/8"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	34 1/2"	39"	16x12"	305	395	DAMP
FOAC	110-60-1	1	1750	10x1 1/4"	8"	6x10"	5 3/4"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	35 3/4"	39"	20x15"	415	530	DARE
†FOAC	220-60-1	1	1750	10x1 1/4"	8"	6x10"	5 3/4"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	35 3/4"	39"	20x15"	415	530	DARK
*HTAC	220-60-3	2	1750	12x2"	10"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	44"	39"	25x20"	575	700	DIME
*HTAC	440-60-3	2	1750	12x2"	10"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	44"	39"	25x20"	575	700	DINT
*HCAC	220-60-3	3	1750	14x2 1/2"	12"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	45 1/4"	38"	25x20"	615	740	DING
*HCAC	440-60-3	3	1750	14x2 1/2"	12"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	45 1/4"	38"	25x20"	615	740	DONG
*HEAC	220-60-3	5	1750	14x3"	14"	8x14"	1 1/4"	2 3/4"	5 1/2"	5"	3 1/4"	51 1/2"	38"	25x20"	700	825	DOCK
*HEAC	440-60-3	5	1750	14x3"	14"	8x14"	1 1/4"	2 3/4"	5 1/2"	5"	3 1/4"	51 1/2"	38"	25x20"	700	825	DOLF
*FSAC	220-60-3	7 1/2	1160	18x3"	18"	10x16"	1 1/2"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	56"	38"	28x23"	1300	1460	DOLT
*FSAC	440-60-3	7 1/2	1160	18x3"	18"	10x16"	1 1/2"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	56"	38"	28x23"	1300	1460	DOOM

†Can also be furnished for 220 or 440 volts, 2 or 3 phase, regular list price.

\*Made in 2 or 3 phase only, also for 550 volts. If 2 phase is desired, mention after code word.

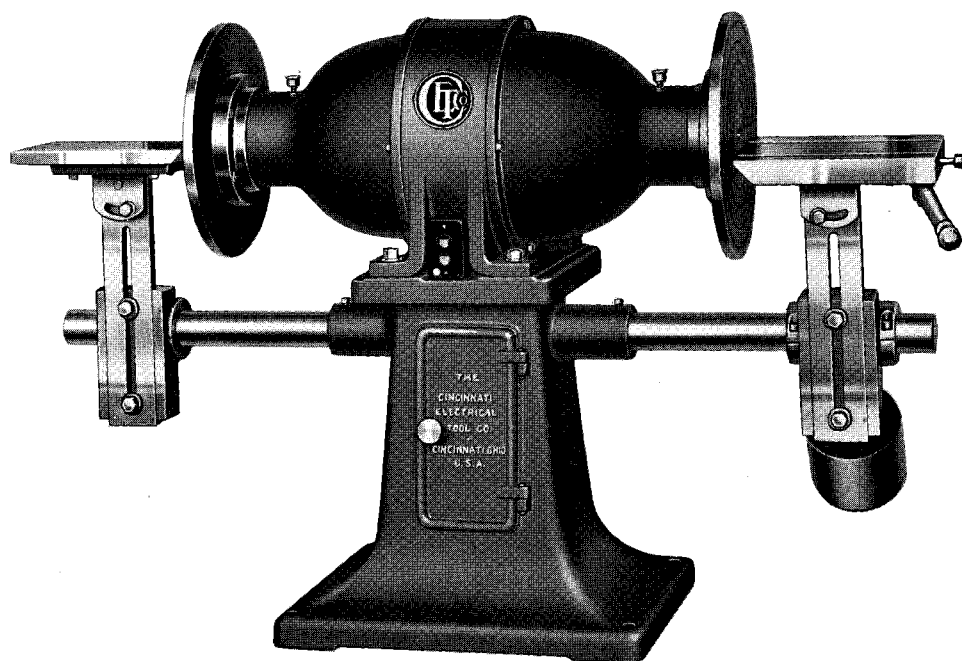
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

FHC	115	1/2	3450	8x1"	7"	6x10"	5 5/8"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	32 1/2"	39"	16x12"	305	395	DRUB
FHC	230	1/2	3450	8x1"	7"	6x10"	5 5/8"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	32 1/2"	39"	16x12"	305	395	DOTS
FOC	115	1	1750	10x1 1/4"	8"	6x10"	5 3/4"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	33 1/2"	39"	20x15"	430	545	DOST
FOC	230	1	1750	10x1 1/4"	8"	6x10"	5 3/4"	1 3/4"	5 1/2"	4 1/2"	2 1/4"	33 1/2"	39"	20x15"	430	545	DOVE
HTC	115	2	1750	12x2"	10"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	44"	39"	25x20"	605	730	DOZE
HTC	230	2	1750	12x2"	10"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	44"	39"	25x20"	605	730	DRAB
HCC	115	3	1750	14x2 1/2"	12"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	45 1/4"	38"	25x20"	655	780	DRAG
HCC	230	3	1750	14x2 1/2"	12"	6x10"	1 1/4"	2"	5 1/2"	4 1/2"	2 1/4"	45 1/4"	38"	25x20"	655	780	DRAM
HEC	115	5	1750	14x3"	14"	8x14"	1 1/4"	2 3/4"	5 1/2"	5"	3 1/4"	52"	38"	25x20"	800	975	DRAW
HEC	230	5	1750	14x3"	14"	8x14"	1 1/4"	2 3/4"	5 1/2"	5"	3 1/4"	52"	38"	25x20"	800	975	DRAY
FSC	115	7 1/2	1160	18x3"	18"	10x16"	1 1/2"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	60"	38"	28x23"	1300	1600	DRIP
FSC	230	7 1/2	1160	18x3"	18"	10x16"	1 1/2"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	60"	38"	28x23"	1300	1600	DRUM

The Cincinnati



## Double End Disc Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

THE CINCINNATI Double Disc Grinders are suitable for a wide variety of surface grinding in shops of all kinds. The spindle is of nickel steel, mounted on extra large ball bearings, with special provision for heavy thrust loads. The discs are of high-grade steel, accurately machined and balanced to ensure running true. A table with hand-lever feed is regularly furnished on the right-hand side of the grinder, with a plain table on the opposite side, but this equipment may be changed to suit individual requirements—price on application. The standard discs may be had properly drilled for mounting steel-back abrasive discs at no additional charge; also arranged to carry ring wheel chucks—price on application. If disc press for gluing abrasive discs to steel discs is required, see page 10. Magnetic starter with both overload and no voltage protection is mounted in the pedestal, with push-button station on the motor frame.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H.P.	Load Speed RPM	Disc Size	Size of Table	Rocker Shaft Diam.	Horiz. Adj. of Table on Rocker Shaft	Vert. Adj. of Table	Hand Lever Feed	Lgth. Overall	Height Floor to Center of Spindle	Size Base at Bottom	Net Wght. Lbs.	Ship. Wght. Lbs.	Code Word
HTAD	220-60-3	2	1750	10"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55"	39"	25x20"	650	775	JACK
HTAD	440-60-3	2	1750	10"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55"	39"	25x20"	650	775	JADE
HCAD	220-60-3	3	1750	12"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55 1/2"	38"	25x20"	690	815	JAMB
HCAD	440-60-3	3	1750	12"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55 1/2"	38"	25x20"	690	815	JEER
HEAD	220-60-3	5	1750	14"	8x14"	2 3/4"	5 1/2"	5"	3 1/4"	65"	38"	25x20"	775	900	JEHU
HEAD	440-60-3	5	1750	14"	8x14"	2 3/4"	5 1/2"	5"	3 1/4"	65"	38"	25x20"	775	900	JOIN
FSAD	220-60-3	7 1/2	1160	18"	10x16"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	72"	38"	28x23"	1175	1375	JUKE
FSAD	440-60-3	7 1/2	1160	18"	10x16"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	72"	38"	28x23"	1175	1375	JOSS

Made in 2 or 3 phase only; also for 550 volts. If 2 phase is desired, mention after code word.

Speed for 25 cycles, 1500 R.P.M.

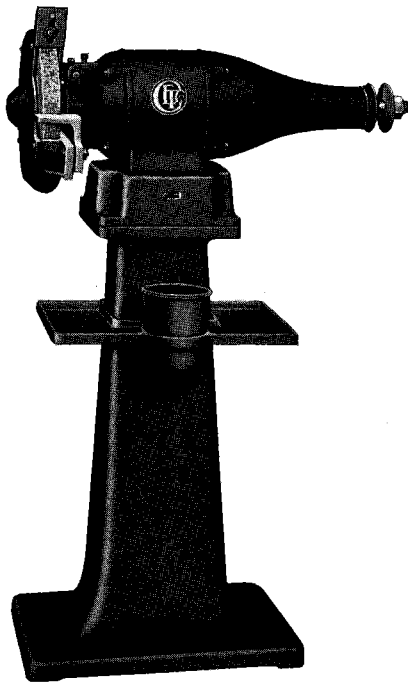
For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

HTD	115	2	1750	10"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	54"	39"	25x20"	680	805	JINK
HTD	230	2	1750	10"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	54"	39"	25x20"	680	805	JOCK
HCD	115	3	1750	12"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55 1/2"	38"	25x20"	730	845	JOKE
HCD	230	3	1750	12"	6x10"	2"	5 1/2"	4 1/2"	2 1/4"	55 1/2"	38"	25x20"	730	845	JOLT
HED	115	5	1750	14"	8x14"	2 3/4"	5 1/2"	5"	3 1/4"	65"	38"	25x20"	875	990	JUST
HED	230	5	1750	14"	8x14"	2 3/4"	5 1/2"	5"	3 1/4"	65"	38"	25x20"	875	990	JOIST
FSD	115	7 1/2	1160	18"	10x16"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	73"	38"	28x23"	1275	1475	JALAP
FSD	230	7 1/2	1160	18"	10x16"	2 3/4"	5 1/2"	5 1/2"	3 3/4"	73"	38"	28x23"	1275	1475	JINGO



THE CINCINNATI ELECTRICAL TOOL CO.



8 and 10-inch



12 and 14-inch

### BALL-BEARING

## Combination Grinders and Buffers

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

THESE Combination Grinders and Buffers offer an unusually wide range of work, as they can be used for grinding and buffing at the same time. Extended spindle can be used with wire, cloth or felt wheels. Wheel guard is fully enclosed safety type, adjustable to the wear of wheel.

$\frac{1}{2}$  and 1 H.P. Grinders furnished with repulsion induction motor for single phase and two-pole toggle switch. Shatter-proof glass eye shield and shaft locking device for changing wheel furnished on 2 and 3 H.P. machines. 2 and 3 H.P. machines equipped with magnetic starter with both overload and no voltage protection, mounted in the pedestal, push-button station on motor frame.

Grinding wheel is not regularly furnished with 2 and 3 H.P. machines, but can be supplied on order. If bench type machine is desired, deduct \$30.00 for 1 H.P.; \$10.00 for 2 and 3 H.P.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H.P.	Load Speed, R.P.M.	Wheel Size	Diam. Shaft Bet. Flanges	Distance Between Wheels	Length, Extended Spindle	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
KHA	110-60-1	$\frac{1}{2}$	3525	8"x1"	$\frac{5}{8}$ "	22 $\frac{1}{4}$ "	12"	38"	16"x12"	195	290	KITTEN
†KHA	220-60-1	$\frac{1}{2}$	3525	8"x1"	$\frac{5}{8}$ "	22 $\frac{1}{4}$ "	12"	38"	16"x12"	195	290	KNIFE
KRA	110-60-1	1	1750	10"x1 $\frac{1}{4}$ "	$\frac{3}{4}$ "	25"	14 $\frac{1}{2}$ "	39"	20"x15"	300	425	KNIGHT
†KRA	220-60-1	1	1750	10"x1 $\frac{1}{4}$ "	$\frac{3}{4}$ "	25"	14 $\frac{1}{2}$ "	39"	20"x15"	300	425	KNOLL
*KTA	220-60-3	2	1750	12"x2"	1 $\frac{1}{4}$ "	29"	16"	38"	25"x20"	470	625	KAFTAN
*KTA	440-60-3	2	1750	12"x2"	1 $\frac{1}{4}$ "	29"	16"	38"	25"x20"	470	625	KAGO
*KVA	220-60-3	3	1750	14"x2 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	29"	16"	38"	25"x20"	500	650	KID
*KVA	440-60-3	3	1750	14"x2 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	29"	16"	38"	25"x20"	500	650	KAMA

†Can also be furnished for 220 or 440 volts 2 or 3 phase, regular list price.  
\*Made in 2 or 3 phase only. If 2 phase is desired, mention after code word.  
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

KH	115	$\frac{1}{2}$	2825	8"x1"	$\frac{5}{8}$ "	22 $\frac{1}{4}$ "	12"	38"	16"x12"	195	290	KEEL
KH	230	$\frac{1}{2}$	2825	8"x1"	$\frac{5}{8}$ "	22 $\frac{1}{4}$ "	12"	38"	16"x12"	195	290	KEEN
KR	115	1	2000	10"x1 $\frac{1}{4}$ "	$\frac{3}{4}$ "	25"	14 $\frac{1}{2}$ "	39"	20"x15"	300	425	KEG
KR	230	1	2000	10"x1 $\frac{1}{4}$ "	$\frac{3}{4}$ "	25"	14 $\frac{1}{2}$ "	39"	20"x15"	300	425	KERNAL
KT	115	2	1750	12"x2"	1 $\frac{1}{4}$ "	29"	13"	38"	25"x20"	525	675	KHAKI
KT	230	2	1750	12"x2"	1 $\frac{1}{4}$ "	29"	13"	38"	25"x20"	525	675	KILT
KV	115	3	1750	14"x2 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	33"	16"	38"	25"x20"	550	700	KISMET
KV	230	3	1750	14"x2 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	33"	16"	38"	25"x20"	550	700	

*The Cincinnati*



2, 3 and 5 H. P.

## Buffing and Polishing Lathes

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

THESE Heavy-Duty Buffing and Polishing Lathes are of the same general design as buffers shown on page 31, with the exception that no spindle supporting sleeves are furnished. Magnetic starter with overload and no voltage protection is standard equipment. Starter is mounted in the pedestal, push-button station on the motor frame.

If Bench Buffer is desired, deduct \$10.00 from list price.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R.P.M.	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
DKA	220-60-3	2	1750	1 1/4"	34"	37 1/2"	25"x20"	375	500	KINK
DKA	440-60-3	2	1750	1 1/4"	34"	37 1/2"	25"x20"	375	500	KAYAK
DLA	220-60-3	3	1750	1 1/4"	34"	38"	25"x20"	400	525	KIT
DLA	440-60-3	3	1750	1 1/4"	31"	38"	25"x20"	400	525	KAZOO
DMA	220-60-3	5	1750	1 1/4"	40"	38"	25"x20"	425	550	KIMONO
DMA	440-60-3	5	1750	1 1/4"	40"	38"	25"x20"	425	550	KODAK

Made in 2 or 3 phase only; also for 550 volts. If 2 phase or odd cycles is desired, mention after code word.

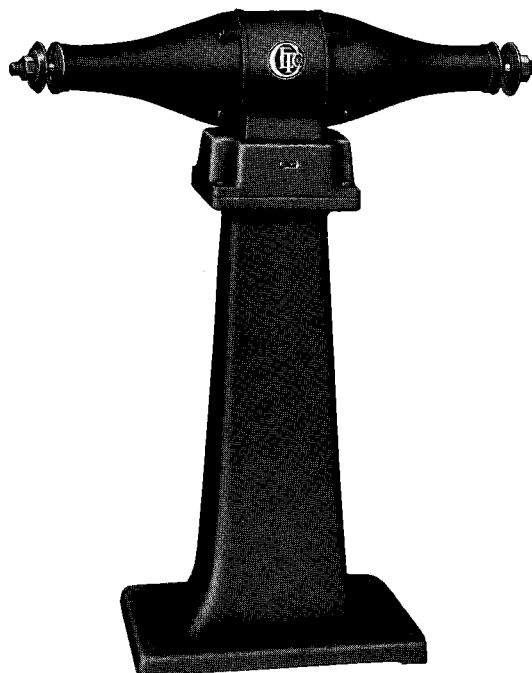
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

DK	115	2	1750	1 1/4"	35"	38"	25"x20"	420	550	KNOT
DK	230	2	1750	1 1/4"	35"	38"	25"x20"	420	550	KNACK
DL	115	3	1750	1 1/4"	35"	39"	25"x20"	475	600	KNAVE
DL	230	3	1750	1 1/4"	35"	39"	25"x20"	475	600	KNUR
DM	115	5	1750	1 1/4"	40"	39"	25"x20"	525	650	KELP
DM	230	5	1750	1 1/4"	40"	39"	25"x20"	525	650	KERITE

Direct Current Buffers can be furnished with variable speed motors at 10% additional charge.



1/2 and 1 H. P.

## Buffing and Polishing Lathes

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**B**UFFING and Polishing Lathes, with repulsion induction motors, especially adapted for buffing and polishing of all kinds. Motor shaft is mounted on four deep-groove radial ball bearings, in dust-proof housings and correctly locked to the shaft, to eliminate wear. Two-pole starting switch is entirely enclosed in the base of the motor.

Buffing wheels are not regularly furnished, but can be supplied on order.

If Bench Buffer is desired, deduct \$20.00 from list price for 1/2 H.P.; \$30.00 for 1 H.P.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R.P.M.	Size Wheel Recommended	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
DHA	110-60-1	1/2	3525	6"x1'	5/8"	29 1/4"	38"	16"x12"	175	275	<b>JOURNAL JUSTICE JUTE JASPER</b>
*DHA	220-60-1	1/2	3525	6"x1'	5/8"	29 1/4"	38"	16"x12"	175	275	
DRA	110-60-1	1	1750	8"x1'	3/4"	32"	39"	20"x15"	260	380	
*DRA	220-60-1	1	1750	8"x1'	3/4"	32"	39"	20"x15"	260	380	

\*Can also be furnished for 220 or 440 volts, 2 or 3 phase, regular list price.  
Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

†1 H.P. Alternating Current Buffer also furnished 3400 R. P. M., if desired.

### DIRECT CURRENT SPECIFICATIONS

DH	115	1/2	2825	6"x1'	5/8"	29 1/4"	38"	16"x12"	175	275	<b>JAR JOY JUDGE JURY</b>
DH	230	1/2	2825	6"x1'	5/8"	29 1/4"	38"	16"x12"	175	275	
DR	115	1	2575	8"x1'	3/4"	32"	39"	20"x15"	260	380	
DR	230	1	2575	8"x1'	3/4"	32"	39"	20"x15"	260	380	



2, 3, 5 and 7½ H. P.

## Buffing and Polishing Lathes

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**H**EAVY-DUTY Buffing and Polishing Lathes, especially designed and ruggedly built for continuous service under the most severe conditions. Motor shaft is of high-grade steel, accurately ground to size, and provided with shaft locking device for changing wheels. Four deep-groove ball bearings are mounted in dust-proof housings and are firmly locked to the shaft to provide end thrust and eliminate wear. Magnetic starter with overload and no voltage protection is mounted in the pedestal. Push-button station is mounted on the motor frame.

Buffing wheels are not regularly furnished, but can be supplied on order.

If Bench Buffer is desired, deduct \$10.00 from list price.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load *Speed, R.P.M.	Diameter Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
DTA	220-60-3	2	1750	1¼"	38½"	37½"	25"x20"	425	565	MUMMY
DTA	440-60-3	2	1750	1¼"	38½"	37½"	25"x20"	425	565	MACAW
DVA	220-60-3	3	1750	1¼"	38½"	38"	25"x20"	450	575	MILLER
DVA	440-60-3	3	1750	1¼"	38½"	38"	25"x20"	450	575	MACRO
DFA	220-60-3	5	1750	1¼"	42" or 52"	38"	25"x20"	475	600	MAJOR
DFA	440-60-3	5	1750	1¼"	42" or 52"	38"	25"x20"	475	600	MALT
DSA	220-60-3	7½	1750	1½"	42" or 52"	37"	28"x23"	620	760	MANLY
DSA	440-60-3	7½	1750	1½"	42" or 52"	37"	28"x23"	620	760	MAPLE

Made in 2 or 3 phase only; also for 550 volts. If 2 phase or odd cycles is desired, mention after code word.

Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

\* Alternating Current Buffers also furnished 3400 R. P. M., if desired.

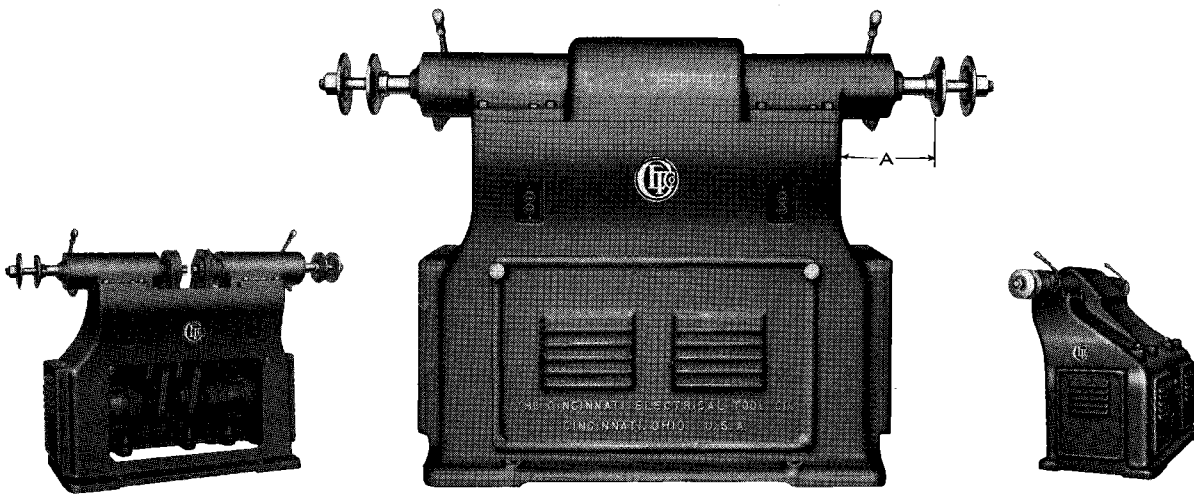
### DIRECT CURRENT SPECIFICATIONS

DT	115	2	1750	1¼"	40"	38"	25"x20"	435	575	MANDATE
DT	230	2	1750	1¼"	40"	38"	25"x20"	435	575	MIRACLE
DV	115	3	1750	1¼"	40"	39"	25"x20"	475	625	MONK
DV	230	3	1750	1¼"	40"	39"	25"x20"	475	625	MOP
DF	115	5	1750	1¼"	42" or 52"	39"	25"x20"	550	700	MAGUEY
DF	230	5	1750	1¼"	42" or 52"	39"	25"x20"	550	700	MALAGA
DS	115	7½	1750	1½"	42" or 52"	38"	28"x23"	650	800	MALAR
DS	230	7½	1750	1½"	42" or 52"	38"	28"x23"	650	800	MANIS

Direct Current Buffers can be furnished with variable speed motors at 10% additional charge.



THE CINCINNATI ELECTRICAL TOOL CO.



3, 5, 7½, 10 and 15 H. P. — Single and Double Motor

## Vee Belt Driven Buffing and Polishing Lathes

Alternating Current — Direct Current

Order by Type, Current and Volts — If Alternating Current, Give Cycles and Phase

**V**EE-BELT Driven Buffers with overhanging spindles, especially designed for the heaviest polishing jobs on large and odd-shaped pieces.

Ball-bearing equipped motors are mounted on heavy columns in vee ways and are securely held in position by heavy clamps and adjusting screws on each motor.

Any spindle speed can be furnished, and speeds are quickly changed by merely changing the motor pulley only. Spindles are of nickel steel, machined to perfect balance, and are mounted in extra large ball-bearings running in oil with labyrinth seals.

The bearing housings can be removed from the cabinet without disturbing the shafts or bearings. Perfect alignment is obtained by two large taper dowel pins.

Brake with external adjustment is provided for each individual spindle to facilitate the changing of buffing wheels.

Extra large cover plates on cabinet give easy access to motors, starters, belts, etc. Louvers in cover plates keep out dust and yet permit circulation of air so essential to long belt life.

Each individual motor has a magnetic starter with overload and low voltage protection, mounted in the cabinet, with push-button control.

### SPECIFICATIONS SINGLE MOTOR DRIVE

Type	Volts	H.P.	Speed R.P.M.	Diam. of Shaft between Bearings	Diam. of Shaft between Flanges	Space between Flanges	Distance between Wheels	Length Spindle Overall	Dimen. "A"	Height to Center of Spindle	Size of Base at Bottom	No. of Ball Bearings	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
COA	220-60-3	3	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1300	1525	TREAT
COA	440-60-3	3	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1300	1525	TOAST
EOA	220-60-3	5	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1350	1570	TOKEN
EOA	440-60-3	5	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1350	1570	TITLE
GOA	220-60-3	7½	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1550	1770	THORN
GOA	440-60-3	7½	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1550	1770	TASTE
HOA	220-60-3	10	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1575	1790	TEACH
HOA	440-60-3	10	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1575	1790	TANGO
LOA	220-60-3	15	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1700	1900	TABLE
LOA	440-60-3	15	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1700	1900	TAFFY

### SPECIFICATIONS DOUBLE MOTOR DRIVE

DOA	220-60-3 Two	3	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1500	1720	TALLY
DOA	440-60-3 Two	3	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1500	1720	TRAIN
MOA	220-60-3 Two	5	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1575	1795	TOPAZ
MOA	440-60-3 Two	5	To Suit	2½"	*1¼"	3"	51¾"	61¾"	9¾"	39"	34½"x24¼"	4	1575	1795	TORCH
NOA	220-60-3 Two	7½	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1650	1870	TOWER
NOA	440-60-3 Two	7½	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1650	1870	TOTAL
SOA	220-60-3 Two	10	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1775	2000	TREAD
SOA	440-60-3 Two	10	To Suit	2½"	*1¼"	3"	54"	64"	9¾"	39"	45"x27"	4	1775	2000	TRIBE

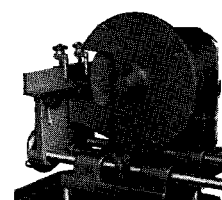
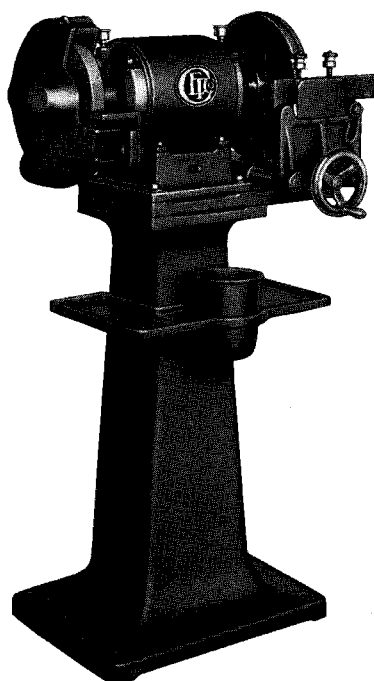
\*Can furnish Shaft 1½" diameter without additional charge.

Dimension "A" can be furnished 17", without extra charge.

Made in 2 or 3 phase only; also for 550 volts. If 2 phase or odd cycles is desired, mention after code word.

Can also be furnished for Direct Current and odd cycles Alternating Current; prices on application.

*The Cincinnati*



Stock Holding Device

## Combination Cut-off Machine and Grinder

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, give Cycles and Phase

**C**OMBINATION Cut-off Machine and Grinder, with fully enclosed ball-bearing motor, suitable for tool-room cutting and grinding, and also for cutting and grinding specimens for microphotography in research laboratories.

The machine carries a 10" x  $\frac{1}{16}$ " abrasive cut-off wheel on the right-hand side, operating at a peripheral speed of approximately 9,000 S.F.M., and the material to be cut is fed into the wheel by means of a hand-screw. The stock is held firmly on both sides of the cut, preventing wheel breakage and a fully enclosed wheel guard affords perfect protection to the operator. The vise or holding fixture may be tilted to give any angle desired up to 15 degrees. The machine will cut stock up to 1 $\frac{1}{4}$ " size, 4" long maximum, in approximately 20 seconds, and the smaller sizes proportionately.

The left-hand side of the machine is equipped with an 8" x 1" grinding wheel, with fully enclosed safety wheel guard adjustable to the wear of the wheel and with exhaust connection. An adjustable tool rest is mounted on the wheel guard. The rotor shaft is of nickel steel, mounted on oversize ball bearings in dust-proof housings. A two-pole starting switch is entirely enclosed in the base of the motor.

Abrasive cut-off wheel not regularly furnished, but can be supplied on order.  
If Bench Type is desired, deduct \$10.00 from list price.

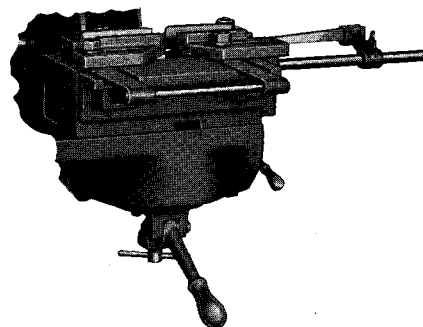
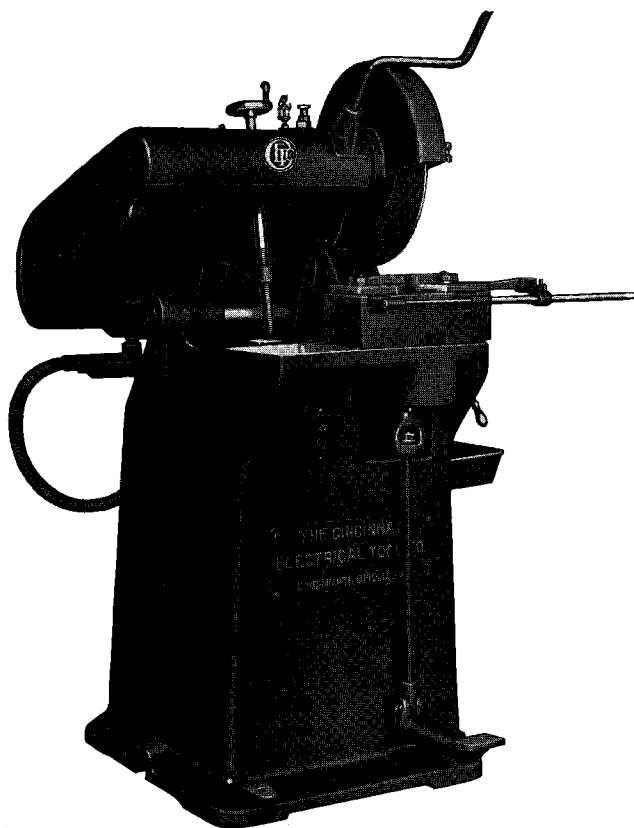
### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H.P.	Load Speed R.P.M.	Grinding Wheel Size	Cut-Off Wheel Size	Diameter of Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
FDA	220-60-3	1	3400	8" x 1"	10" x $\frac{1}{16}$ "	$\frac{3}{4}$ "	17"	39"	20" x 15"	375	480	GABY
FDA	440-60-3	1	3400	8" x 1"	10" x $\frac{1}{16}$ "	$\frac{3}{4}$ "	17"	39"	20" x 15"	375	480	GAGER

If two-phase is desired, mention after Code Word. Can also be furnished with repulsion induction motor, 110 or 220 volts, 60 cycles, single-phase, regular list price.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H.P.	Load Speed R.P.M.	Grinding Wheel Size	Cut-Off Wheel Size	Diameter of Shaft Bet. Flanges	Distance Between Wheels	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
FD	115	1	3200	8" x 1"	10" x $\frac{1}{16}$ "	$\frac{3}{4}$ "	17"	39"	20" x 15"	375	480	GIMP
FD	230	1	3200	8" x 1"	10" x $\frac{1}{16}$ "	$\frac{3}{4}$ "	17"	39"	20" x 15"	375	480	GAMY



Hand operated,  
positive locking vise.

## High Speed Cut-off Machine

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

"THE CINCINNATI" High Speed Cut-off Machine, unexcelled for the speedy cutting of steel alloys, non-ferrous metals such as brass, copper, aluminum, as well as fibrous materials of all kinds, in various sizes, angles and shapes up to 2 1/4" inclusive.

Magnetic starter, with both overload and no-voltage protection, is mounted in the pedestal, with push-button station on front of pedestal.

When ordering, specify whether hand or foot operated vise for straight cuts only is desired, also whether 12" or 14" diameter wheel will be used.  
Also furnished with angle-cutting vise, hand or foot operated, \$25.00 extra. (Specify which is desired.)  
Abrasive cut-off wheels are not regularly furnished, but can be supplied on order.

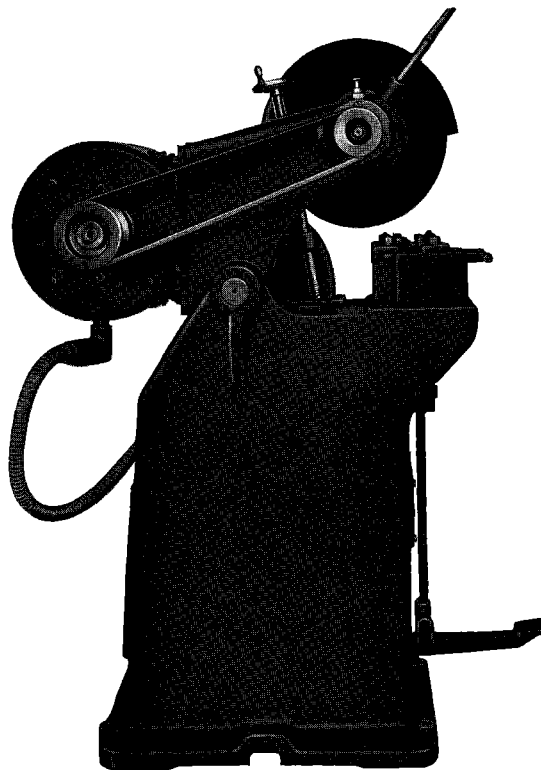
### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Spindle Speed 12" Wheel	Spindle Speed 14" Wheel	Height Overall	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
JCA	220-60-3	7 1/2	5200 R.P.M.	4300 R.P.M.	64"	25" x 23 1/2"	1250	1430	GAEL
JCA	440-60-3	7 1/2	5200 R.P.M.	4300 R.P.M.	64"	25" x 23 1/2"	1250	1430	GAFF

Made in 2 or 3 phase only; also for 550 volts. If 2 phase is desired, mention after code word.  
An additional price is charged for motors of other current characteristics. Prices on application.

### DIRECT CURRENT SPECIFICATIONS

JC	115	7 1/2	5200 R.P.M.	4300 R.P.M.	64"	25" x 23 1/2"	1300	1480	GAIT
JC	230	7 1/2	5200 R.P.M.	4300 R.P.M.	64"	25" x 23 1/2"	1300	1480	GAIN



Side view, with belt guard removed, showing swivel arm and motor mounting.

THIS machine is built to carry abrasive wheels, 12" or 14" diameter x  $\frac{3}{4}$ " or  $\frac{1}{8}$ " thick x 1" bore, operating at a peripheral speed of approximately 16,000 surface feet per minute.

The cutting wheel is completely guarded, with the exception of that portion necessary for the cutting operation, insuring perfect protection to the operator.

The sparks and the abrasive dust are carried backward from the operator through an exhaust connection to a water pan within the pedestal.

The machine is driven by a  $7\frac{1}{2}$  H.P. ball-bearing motor, 3,600 R.P.M., with Vee Belts from the motor to spindle which carries the cutting wheel and which is also mounted on deep-groove ball bearings.

The cutting wheel, spindle, wheel and wheel guard are mounted on a swivel arm which pivots on the pedestal and is balanced by the weight of the motor in the rear.

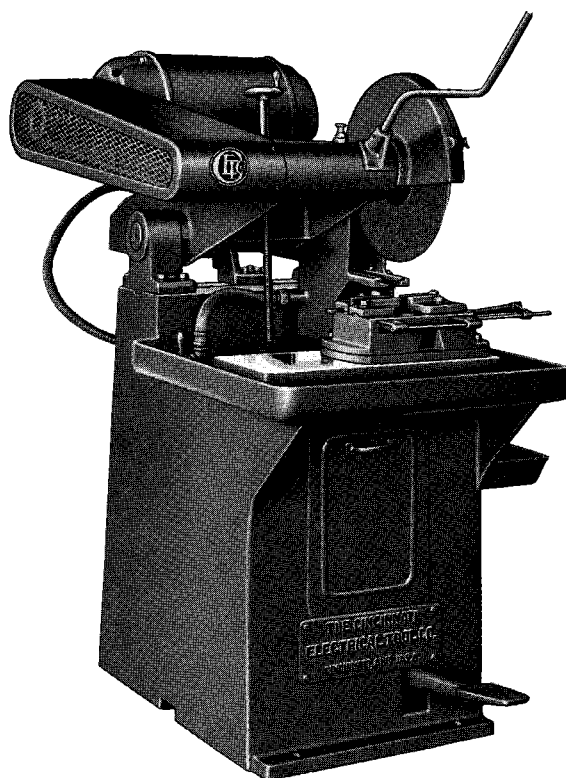
The machine is suitable for making cuts, straight or angle, up to 45°. The angle-cutting vise is clamped to the pedestal of the machine, graduations on the table make angle cutting accurate and fast.

The abrasive wheel is moved into the work by means of a hand lever at the front of the machine, and as the material is tightly clamped in position on both sides of the cut, it is impossible to cramp the work against the side of the wheel, causing it to break.

A stop is provided which can be set for any depth of cut, and the length to be cut is regulated by an adjustable longitudinal stop.

THESE PIECES CUT WITH *THE CINCINNATI* HIGH SPEED CUT-OFF MACHINE





## Wet Abrasive Cut-Off Machine

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

THE CINCINNATI Wet Abrasive Cut-Off Machine is suitable for straight or angle cutting of practically any material encountered in general manufacturing, including steel alloys, non-ferrous metals such as brass, copper, aluminum, as well as fibrous and plastic materials in various sizes, angles and shapes.

THE CINCINNATI Wet Cut-Off Machine not only greatly increases the life of the abrasive cut-off wheels, but also produces a cut with a minimum of burr and eliminates burning, as the coolant is directed not only on the point of contact of the cut, but on the sides of the wheel as well.

Abrasive cut-off wheels are not regularly furnished, but can be supplied on order.

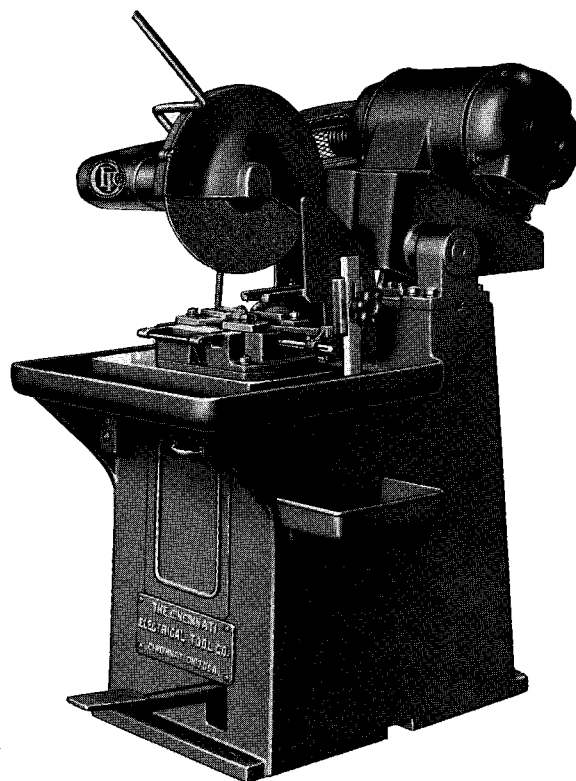
### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Wheel Size	Diameter of Shaft between Flanges	Spindle Speed	Peripheral Speed	Height Overall	Size of Base at Bottom	Net Weight Pounds	Ship. Weight Pounds	Code Word
JCAW	220-60-3	7½	16"x3½"	1"	2300	9500 S.F.M.	59"	33½"x23½"	1625	2050	GALIOT
JCAW	440-60-3	7½	16"x3½"	1"	2300	9500 S.F.M.	59"	33½"x23½"	1625	2050	GALENA

Made in 2 or 3 phase only. If 2-phase or 550 volts is desired, mention after code word. An additional price is charged for motors of other current characteristics. Prices on application.

### DIRECT CURRENT SPECIFICATIONS

JCW	115	7½	16"x3½"	1"	2300	9500 S.F.M.	59"	33½"x23½"	1675	2095	GAMBIT
JCW	230	7½	16"x3½"	1"	2300	9500 S.F.M.	59"	33½"x23½"	1675	2095	GASIFY



THE CINCINNATI Wet Abrasive Cut-Off Machine is suitable for making straight or angle cuts in solids up to  $2\frac{1}{4}$ " or tubing up to  $3\frac{1}{2}$ " diameter, the same vise being suitable for the various cuts. In cutting angles up to  $45^\circ$  the maximum capacity is  $2\frac{1}{4}$ ". Graduations on the table make angle-cutting fast and accurate. The material is held in the vise by spring tension on the jaws and the work is released after the cut is completed by the foot lever, leaving the operator's hands free at all times. The work is held securely on both sides of the cut, eliminating the possible cramping of work and preventing wheel breakage. The abrasive wheel is moved into the work by means of a hand lever and the arm which carries the abrasive wheel pivots on the pedestal with a counterbalance for easy operation. The abrasive cut-off wheel is completely guarded, with exception of that portion necessary for the actual cutting operation, affording perfect protection to the operator.

A stop is provided which can be set for any depth of cut within the machine's capacity, and a longitudinal stop is provided for regulating the length of the material to be cut.

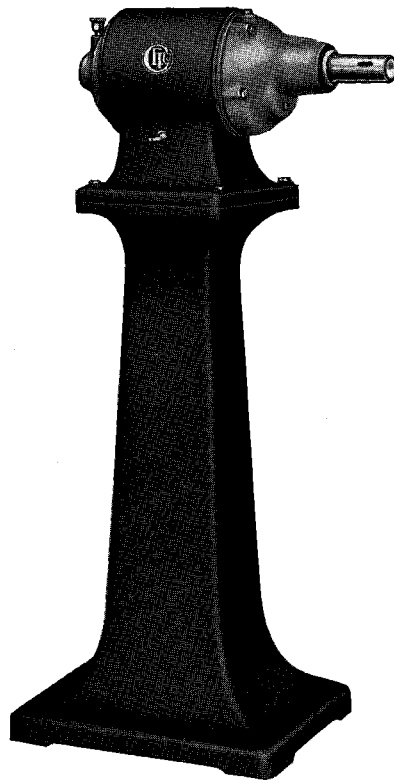
Three sets of wheel flanges, in different sizes, are furnished to ensure the maximum use of the abrasive wheels. A shaft locking device facilitates changing of wheels. The coolant system consists of a  $\frac{1}{4}$  H.P. direct motor driven centrifugal pump with ten-gallon tank, piping and conveniently located control valve.

The spindle is of nickel steel, mounted on sealed-type deep-groove ball bearings running in oil. Labyrinth seals are provided to prevent the ingress of grit or dirt into the bearing housings. A conveniently located drain plug facilitates oil renewal.

The spindle is driven by multiple vee belts from a  $7\frac{1}{2}$  H.P. Ball Bearing Drip-Proof Motor, 1,800 R.P.M., with magnetic starter with overload and no voltage protection and push-button control. Can also be furnished with 10 or 15 H.P. motor, prices on application.



THE CINCINNATI ELECTRICAL TOOL CO.



## Ball-Bearing Speed Lathe

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**B**ALL-BEARING Speed Lathe, especially adapted for burring, reaming, counter-sinking, filing, polishing and lapping small parts of all kinds. Deep groove ball bearings are mounted in dust-proof housings and correctly locked to the motor shaft to provide end thrust and eliminate shaft wear. Switch is entirely enclosed in the base of the motor.

Furnished in speeds 90 to 3400 R. P. M. to meet special applications. May be had with chuck instead of Morse taper socket if desired.

If Bench Lathe is desired, deduct \$20.00 from list price.

### ALTERNATING CURRENT SPECIFICATIONS

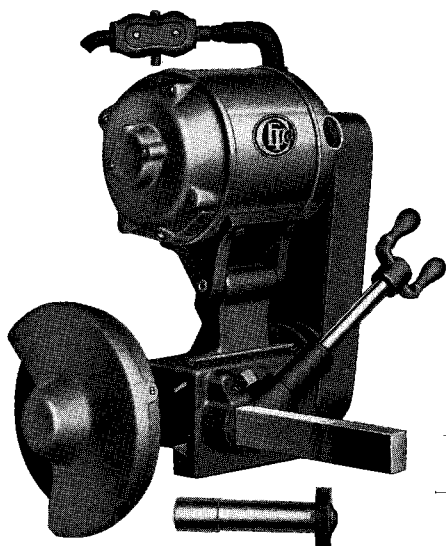
Type	Volts	H. P.	Taper Socket	Height to Center of Spindle	Size of Base at Bottom	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
FBA	110-60-1	$\frac{3}{4}$	No. 2	38 $\frac{3}{4}$ "	16"x12"	150	245	VALET VAMPIRE
*FBA	220-60-1	$\frac{3}{4}$	No. 2	38 $\frac{3}{4}$ "	16"x12"	150	245	

\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.  
For other than 50 or 60 cycles, increase price 10%.

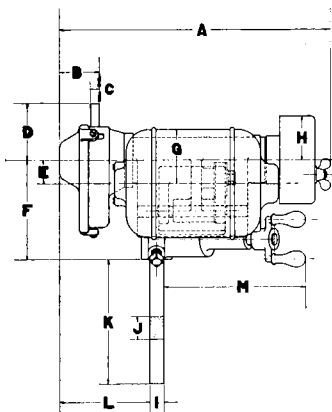
### DIRECT CURRENT SPECIFICATIONS

FB	115	$\frac{3}{4}$	No. 2	38 $\frac{3}{4}$ "	16"x12"	165	260	VAGRANT VAIL
FB	230	$\frac{3}{4}$	No. 2	38 $\frac{3}{4}$ "	16"x12"	165	260	

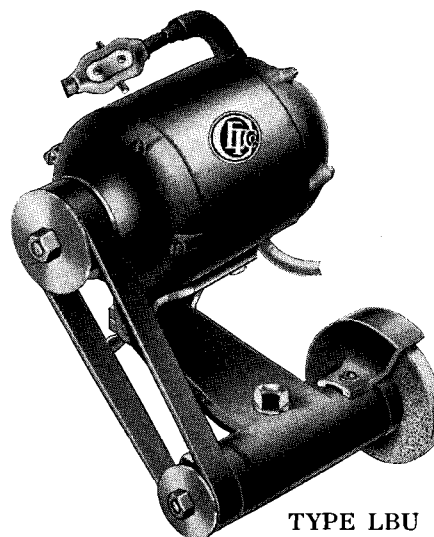
*The Cincinnati*  
ELECTRICAL TOOL CO.



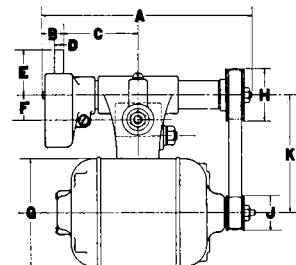
TYPE FU



Type	A	B	C	D	E	F	G	H	I	J	K	L	M
FU	12"	1 1/4"	3/8"	2 1/2"	1 3/4"	4 3/8"	2 1/8"	1 1/8"	5/8"	1"	5 1/8"	2 7/8"	5 3/8"
LU	12"	1 1/4"	3/8"	2 1/2"	1 3/4"	3"	2 1/8"	1 1/8"	5/8"	1"	5 1/8"	6 3/8"	5 3/8"



TYPE LBU



Type	A	B	C	D	E	F	G	H	J	K
LBU	9 1/4"	1 1/8"	3 3/8"	3/8"	2"	1 1/2"	4 1/8"	2 1/8"	1 1/2"	5 1/8"

## Ball Bearing Tool Post Grinders

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

**TYPES FU and LU Belt Driven Tool Post Grinders**, with and without feed respectively, especially adapted for grinding lathe centers, cutters, reamers, rolls, dies, etc.; can also be used in a shaper or planer for surface grinding. Offset spindle construction affords maximum clearance across the face of the grinding wheel. Pivotal mounting of motor on bracket provides for maintenance of proper belt tension. Type FU has a 3" horizontal travel through the V slide by means of a worm and is fitted with a gib to take up the wear. Internal grinding mandrel is 4 1/8" long.

Furnished complete as illustrated.

**TYPE LBU Belt Driven Grinder** for mounting on compound rest of 9" lathes and larger. Will grind work within 2 1/2" of the maximum lathe swing. The Grinder may be swiveled about the clamping bolt and proper provision is also made for changing the height of the spindle. The universal motor is pivotally mounted on the spindle bracket for maintaining proper belt tension. The distance from the center of the spindle to the center of the tool post is 1 1/8". The maximum distance from the center of the spindle to the base is 1". Internal grinding mandrel is 4 1/8" long.

In ordering, give dimensions of the slot in compound rest, so that proper adapter may be furnished.

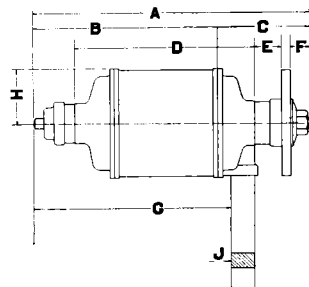
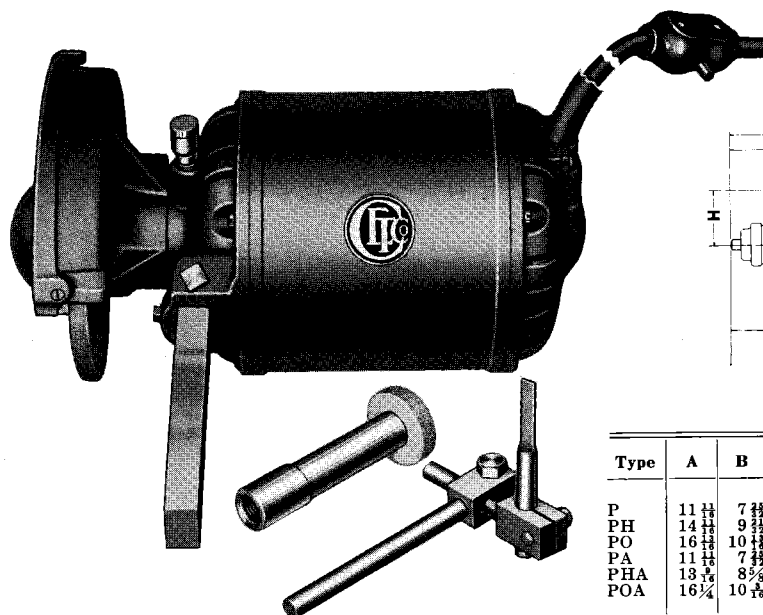
Furnished complete as illustrated.

### SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Size External Wheel	Size Internal Wheel	Diameter Shaft Between Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
FU with feed	110	1/2	3450	5" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	33	50	BACON
FU with feed	220	1/2	3450	5" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	33	50	BEAR
LU without feed	110	1/2	3450	5" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	29	46	BEAK
LU without feed	220	1/2	3450	5" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	29	46	BEAL
LBU	110	1/2	6000	4" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	20	30	BAHIA
LBU	220	1/2	6000	4" x 3/8"	1 1/2" x 3/8" x 3/8"	1 1/2"	20	30	BEAU



THE CINCINNATI ELECTRICAL TOOL CO.



Type	A	B	C	D	E	F	G	H	J
P	11 1/8	7 3/8	3 3/8	7 3/8	1 1/8	1 1/8	7 3/8	2 1/8	1 x 3/8
PH	14 1/8	9 3/8	5 3/8	9 3/8	1 1/8	1 1/8	10 3/8	3 1/8	1 1/4 x 3/4
PO	16 1/8	10 3/8	6 3/8	11 3/8	1 1/8	1 1/8	12 3/8	3 3/8	1 3/4 x 1 1/4
PA	11 1/8	7 3/8	3 3/8	7 3/8	1 1/8	1 1/8	7 3/8	2 1/8	1 x 3/8
PHA	13 1/8	8 3/8	4 3/8	8 3/8	1 1/8	1 1/8	9 3/8	3 1/8	1 1/4 x 3/4
POA	16 1/8	10 3/8	6 3/8	10 3/8	1 1/8	1 1/8	12 3/8	3 3/8	1 3/4 x 1 1/4

## Tool Post Grinder

### Without Feed

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**T**OOL POST GRINDER without feed is designed for use on lathes with compound rest and is suitable for grinding lathe centers, reamers, dies, rolls, etc. The shank is of steel and has a round end, permitting the motor to be set at any angle. A double row ball bearing provides for radial as well as thrust load on the grinding wheel end of shaft, with a deep-groove single-row plate seal ball bearing on other end. Bearings are protected by labyrinth seals against the ingress of dust and grit. Extension mandrel is used for internal grinding. Standard lengths of internal grinding mandrels are 4 1/8" for 1/4 H.P. Grinders and 7" for 1/2 H.P. Grinders. Special length mandrels can be furnished on order. Tooth rest serves as an index for grinding cutters, reamers, etc.

Furnished complete with rubber-covered cable, attachment plug and all attachments as illustrated. Tooth Rest and Extension Mandrel furnished with 1/4 and 1/2 H.P. Grinders only; furnished on order for 1 H.P. Grinder.

### ALTERNATING CURRENT SPECIFICATIONS

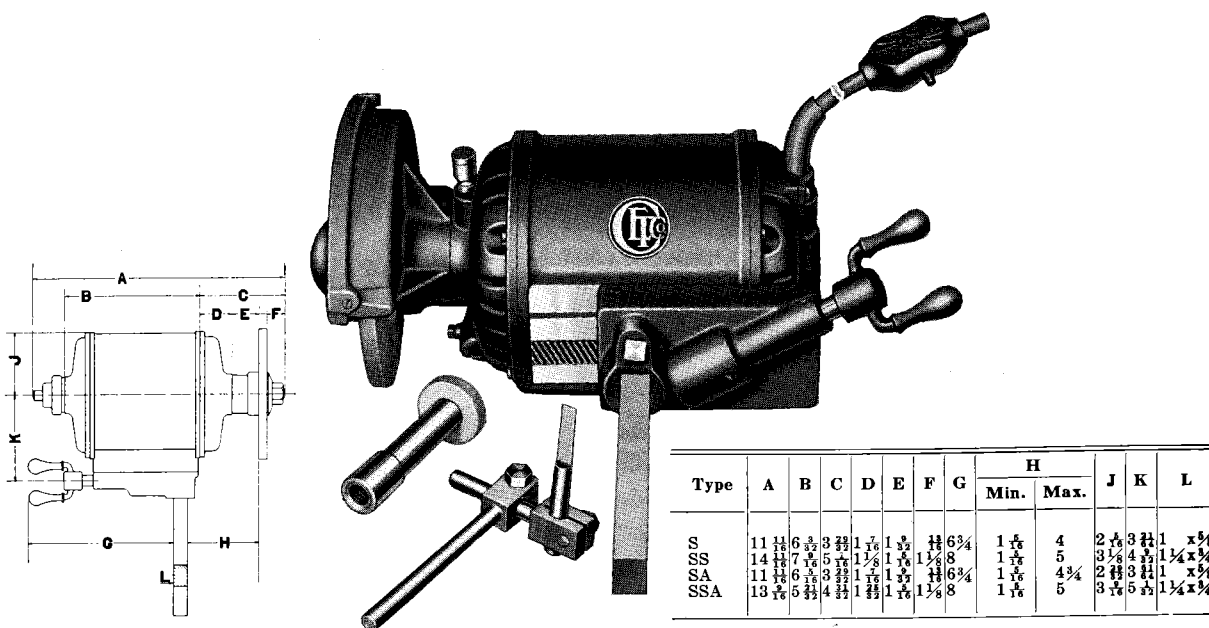
Type	Volts	H. P.	Load Speed, R. P. M.	Size External Wheel	Size Internal Wheel	Diameter Shaft Bet. Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
PA,	110-60-1	1/4	3450	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	35	45	FABLE FORBID FABRIC FORD BELT OLIVE
*PA,	220-60-1	1/4	3450	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	35	45	
PHA,	110-60-1	1/2	3450	8"x1"	2"x1 1/2"x1 1/2"	2"	45	65	
*PHA,	220-60-1	1/2	3450	8"x1"	2"x1 1/2"x1 1/2"	2"	45	65	
POA	110-60-1	1	1750	10"x1"	Furnished on Order	3/4"	95	145	
*POA	220-60-1	1	1750	10"x1"	Furnished on Order	3/4"	95	145	

\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Size External Wheel	Size Internal Wheel	Diameter Shaft Bet. Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
P,	115	1/4	3650	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	22	32	ESSAY ESTEEM ESTATE ESTOP FOLLOW BALANCE
P,	230	1/4	3650	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	22	32	
PH,	115	1/2	2650	8"x1"	2"x1 1/2"x1 1/2"	2"	45	65	
PH,	230	1/2	2650	8"x1"	2"x1 1/2"x1 1/2"	2"	45	65	
PO	115	1	2000	10"x1"	Furnished on Order	3/4"	105	150	
PO	230	1	2000	10"x1"	Furnished on Order	3/4"	105	150	

The Cincinnati



## Tool Post Grinder

### With Feed

**T**OOL POST GRINDER, with feed especially adapted for grinding lathe centers, cutters, reamers, rolls, dies, etc., can also be used in shaper or planer for surface grinding. The shank is of steel and has a round end, permitting the motor to be set at any angle. The motor has a 3-inch horizontal travel through the V-slide by means of a worm, and is fitted with a gib to take up the wear. A double row precision ball bearing provides for radial as well as thrust load on the grinding-wheel end of shaft, with a deep-groove, single-row plate seal ball bearing on other end. Bearings are protected by labyrinth seals against the ingress of dust and grit. Extension mandrel is used for internal grinding. Standard lengths of internal grinding mandrels are 4 1/8" for 1/4 H.P. Grinders and 7" for 1/2 H.P. Grinders. Special length mandrels can be furnished on order. Tooth rest serves as an index for grinding cutters, reamers, etc.

Furnished complete with Electric Cable, Attachment Plug and All Attachments as illustrated.

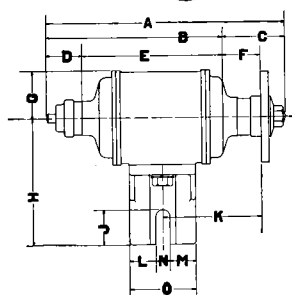
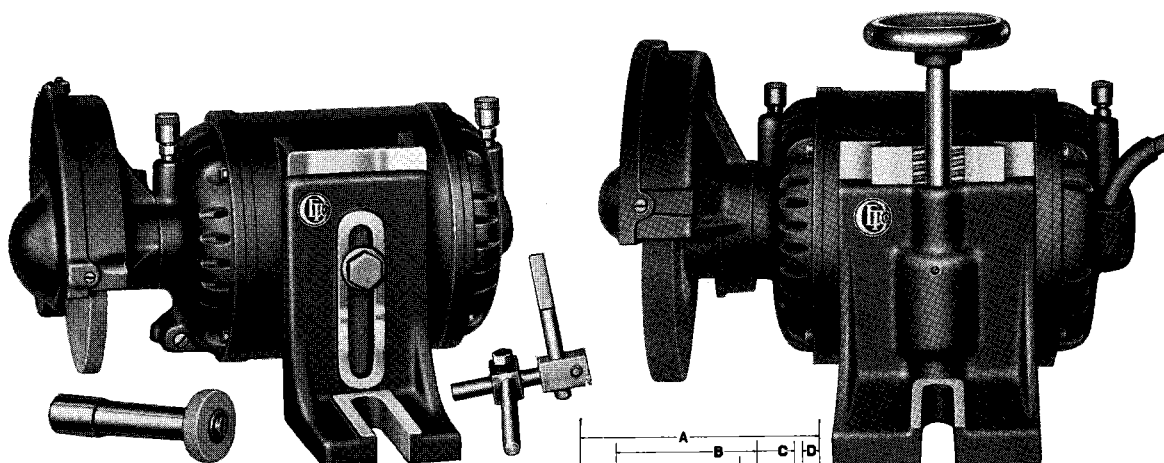
### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Size External Wheel	Size Internal Wheel	Diameter Shaft Bet. Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
SA	110-60-1	1/4	3450	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	40	50	FACTOR FALTER FAGOT FAMISH
*SA	220-60-1	1/4	3450	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	40	50	
SSA	110-60-1	1/2	3450	8"x1"	2"x1 1/2"x1 1/2"	1 1/2"	55	75	
*SSA	220-60-1	1/2	3450	8"x1"	2"x1 1/2"x1 1/2"	1 1/2"	55	75	

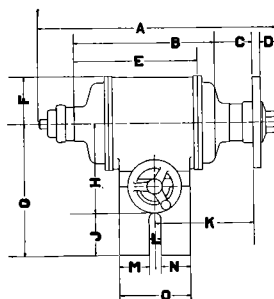
\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed, R. P. M.	Size External Wheel	Size Internal Wheel	Diameter Shaft Bet. Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
S	115	1/4	3650	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	27	37	ETHER RULOGY ETHICAL EVADE
SS	230	1/4	3650	6"x1 1/2"	1 1/2"x3/8"x3/8"	1 1/2"	27	37	
SS	115	1/2	2650	8"x1"	2"x1 1/2"x1 1/2"	1 1/2"	50	75	
SS	230	1/2	2650	8"x1"	2"x1 1/2"x1 1/2"	1 1/2"	50	75	



Vertical Adjustment



Vertical Feed

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O
TP	11 1/4	8 1/4	3 1/4	1 1/2	7 1/4	1 1/4	2 1/4	6 1/4	1 1/4	4 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TPA	11 1/4	8 1/4	3 1/4	1 1/2	7 1/4	1 1/4	2 1/4	6 1/4	1 1/4	4 1/4	1 1/4	1 1/4	1 1/4	1 1/4

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O
T	14 1/4	9 1/4	2 1/4	1 1/4	8 1/4	3 1/4	7 1/4	4 1/4	2 1/4	6 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TT	16 1/4	11 1/4	2 1/4	1 1/4	9 1/4	3 1/4	10 1/4	7 1/4	3 1/4	7 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TV	29 1/4	13 1/4	3 1/4	1 1/4	12 1/4	5 1/4	13 1/4	7 1/4	9 1/4	11 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TF	24 1/4	13 1/4	3 1/4	1 1/4	12 1/4	5 1/4	13 1/4	7 1/4	9 1/4	11 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TA	13 1/4	7 1/4	2 1/4	1 1/4	6 1/4	3 1/4	9 1/4	6 1/4	3 1/4	5 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TTA	16 1/4	9 1/4	2 1/4	1 1/4	8 1/4	3 1/4	10 1/4	7 1/4	3 1/4	6 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TVA	23 1/4	12 1/4	3 1/4	1 1/4	11 1/4	5 1/4	12 1/4	7 1/4	8 1/4	10 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TFA	23 1/4	12 1/4	3 1/4	1 1/4	11 1/4	5 1/4	12 1/4	7 1/4	8 1/4	10 1/4	1 1/4	1 1/4	1 1/4	1 1/4

## Angle Plate Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

**A**NGLE-PLATE GRINDERS, especially adapted for grinding spindles, rolls, journals, bushings, connecting rods and surfaces. For use on lathes, planers, shapers and boring mills. A double row precision ball bearing is provided on the grinding wheel end of shaft to take care of both radial as well as thrust loads, with a deep groove single-row plate seal ball bearing on the opposite end. The 1/4 H.P. Grinder has no vertical feed, but can be swiveled to any angle by means of the set-screw and slot in the angle plate. Grinders of 1/2 H.P. to 3 H.P. have vertical feed of 4 1/4" to 9 1/2", according to size.

Furnished complete as illustrated, with electric cable and attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Size Wheel	Diameter Shaft Bet. Flanges	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
TPA	110-60-1	1/4	3450	6"x 1/2"	1/2"	32	50	CANAL
†TPA	220-60-1	1/4	3450	6"x 1/2"	1/2"	32	50	CABIN
TA	110-60-1	1/2	3450	8"x1"	3/8"	60	85	FORTIFY
†TA	220-60-1	1/2	3450	8"x1"	3/8"	60	85	FRAY
TTA	110-60-1	1	1750	10"x1"	3/4"	100	140	FOSIL
†TTA	220-60-1	1	1750	10"x1"	3/4"	100	140	FRESCO
*TVA	220-60-3	2	1750	12"x1 1/2"	1 1/4"	280	350	FRIGATE
*TVA	440-60-3	3	1750	12"x1 1/2"	1 1/4"	280	350	FARINA
*TFA	220-60-3	3	1750	14"x2"	1 1/4"	300	370	FROCK
*TFA	440-60-3	3	1750	14"x2"	1 1/4"	300	370	FELLOE

†Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

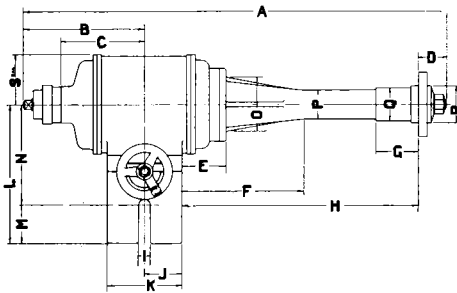
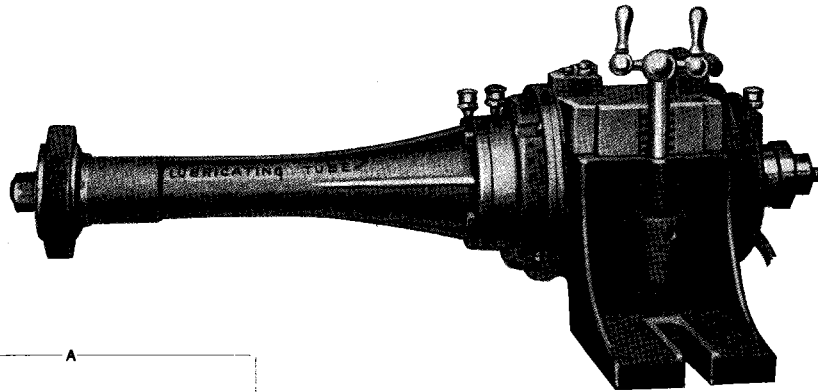
\*Made in 2 or 3 phase only. If 2 phase or 550 volts is desired, mention after code word.

Speed for 25 cycles, 1500 R.P.M.

For other than 50 or 60 cycles, increase price 10%.

### DIRECT CURRENT SPECIFICATIONS

TP	115	1/4	3650	6"x 1/2"	1/2"	20	35	CADET
TP	230	1/4	3650	6"x 1/2"	1/2"	20	35	CADDY
T	115	1/2	2650	8"x1"	3/8"	52	80	FORETOP
T	230	1/2	2650	8"x1"	3/8"	52	80	FORMAL
TT	115	1	2000	10"x1"	3/4"	100	145	FORFEIT
TT	230	1	2000	10"x1"	3/4"	100	145	FORSAKE
TV	115	2	1700	12"x1 1/2"	1 1/4"	315	380	FORGAVE
TV	230	2	1700	12"x1 1/2"	1 1/4"	315	380	FORMER
TF	115	3	1500	14"x2"	1 1/4"	340	400	FORGE
TF	230	3	1500	14"x2"	1 1/4"	340	400	PORT



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
V	26 1/2	7 1/2	5 1/2	1 3/4	2 1/4	7 1/4	2 3/4	15 1/4	1 1/2	2 1/4	4 1/2	8 1/4	2 1/2	6 1/4	3 3/4	1 1/4	2 1/4	2 1/4	3 1/4
VV	27 1/2	7 1/2	5 1/2	2 1/4	3 1/4	8 1/4	2 1/4	15 1/4	1 1/2	2 1/4	4 1/2	10 1/4	2 1/2	6 1/4	3 3/4	1 1/4	2 1/4	2 1/4	3 1/4
VA	24 1/2	5 1/2	3 1/4	1 3/4	2 3/4	7 1/4	2 3/4	14 1/4	1 1/2	2 1/4	4 1/2	9 1/4	2 1/2	6 1/4	3 3/4	1 1/4	2 1/4	2 1/4	3 1/4
VVA	27 1/2	6 1/2	3 1/4	2 1/4	2 3/4	8 1/4	2 1/4	14 1/4	1 1/2	2 1/4	4 1/2	10 1/4	2 1/2	6 1/4	3 3/4	1 1/4	2 1/4	2 1/4	3 1/4

\*Can be furnished with extensions giving 6' and 12' added lengths to these dimensions.

1/2 and 1 H. P.

## Internal Grinders — Vertical Feed

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, Give Cycles and Phase.

INTERNAL GRINDERS which are recommended for finishing Air, Steam or Gas Engine Cylinders; also, for dies and cylindrical work of all kinds. These tools are of the same general design as the Parallel Grinders, shown on page 40, having a vertical adjustment of about 4 1/4", and are used in the same manner.

The standard size of extension spindle is 12", but shorter or longer furnished as required. The extension is detachable at the body of the motor and the Grinder can be used for external work.

### ALTERNATING CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Size Wheel	Diam. Shaft Between Flanges	Length Std. Ext.	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
VA	110-60-1	1/2	3450	+5" x 1"	5/8"	12"	60	95	FRUGAL
*VA	220-60-1	1/2	3450	+5" x 1"	5/8"	12"	60	95	FULLNESS
VVA	110-60-1	1	3450	+6" x 1"	3/4"	12"	90	125	FUDGE
*VVA	220-60-1	1	3450	+6" x 1"	3/4"	12"	90	125	FUNNEL

\*Can also be furnished for 220, 440 or 550 volts, 2 or 3 phase, regular list price.

### DIRECT CURRENT SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Size Wheel	Diam. Shaft Between Flanges	Length Std. Ext.	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
V	115	1/2	2650	+5" x 1"	5/8"	12"	65	100	FRONT
VV	230	1/2	2650	+5" x 1"	5/8"	12"	65	100	FROUNCE
VV	115	1	2675	+6" x 1"	3/4"	12"	100	135	FROTH
VV	230	1	2675	+6" x 1"	3/4"	12"	100	135	FROWN

†Smaller or larger diameter wheels can be furnished; minimum diameter wheels, 1/2 H.P., 2"; 1 H.P., 3 1/2".



5 and 6-inch

## Portable Grinders

Universal Motor for Direct and Alternating Current, 25 to 60 Cycles

**L**IGHT weight Ball Bearing Portable Grinders, especially adapted for grinding off gas and arc welds, also sanding, buffing and polishing of all kinds. They are unusually easy to handle and have unlimited application for portable grinding work within the limits of their rated capacities. The armature and grinding spindle are mounted on ball bearings, gears are of alloy steel, heat-treated and run in grease-tight compartment. Patented overrunning clutch construction (free wheeling) eliminates vibration, gear noise and chatter, ensuring quiet and long, trouble-free performance.

Furnished complete with Grinding Wheel, Adjustable Wheel Guard, and 15 feet all rubber cable and attachment plug.

### SPECIFICATIONS

Type	Volt	H. P.	Speed, R. P. M.	Size Wheel	Diameter Shaft Bet. Flanges	Motor Dia. and Length Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
HBV	110	$\frac{1}{2}$	4600	5"x $\frac{3}{4}$ "	$\frac{1}{2}$ "	4 $\frac{1}{2}$ "x19	16	30	GRACE
HBV	220	$\frac{1}{2}$	4600	5"x $\frac{3}{4}$ "	$\frac{1}{2}$ "	4 $\frac{1}{2}$ "x19	16	30	GRADE
HHU	110	$\frac{1}{2}$	3600	5"x1"	$\frac{3}{8}$ "	5 $\frac{1}{2}$ "x22	23	37	GRASS
HHU	220	$\frac{1}{2}$	3600	5"x1"	$\frac{3}{8}$ "	5 $\frac{1}{2}$ "x22	23	37	GROVE
NSU	110	$\frac{3}{4}$	3600	6"x1"	$\frac{3}{8}$ "	5 $\frac{3}{8}$ "x22 $\frac{3}{4}$	27	42	GALAXY
NSU	220	$\frac{3}{4}$	3600	6"x1"	$\frac{3}{8}$ "	5 $\frac{3}{8}$ "x22 $\frac{3}{4}$	27	42	GALLIC



3/4 H. P.

1 and 1 1/2 H. P.

## Portable Grinders

Alternating Current — Direct Current

Order by Type, Current and Volts. If Alternating Current, give Cycles and Phase

**H** EAVY duty Portable Ball Bearing Grinders especially adapted for grinding rough castings, welded metal, or general grinding, buffing, and sanding of all kinds where production is speeded up by taking the tool to the work. Ball bearings are mounted in dust-proof housings, preventing any possibility of dirt or grit getting into the bearings.

Furnished complete with Grinding Wheel, Adjustable Wheel Guard, and 15 feet all rubber cable and attachment plug.

### ALTERNATING CURRENT SPECIFICATIONS

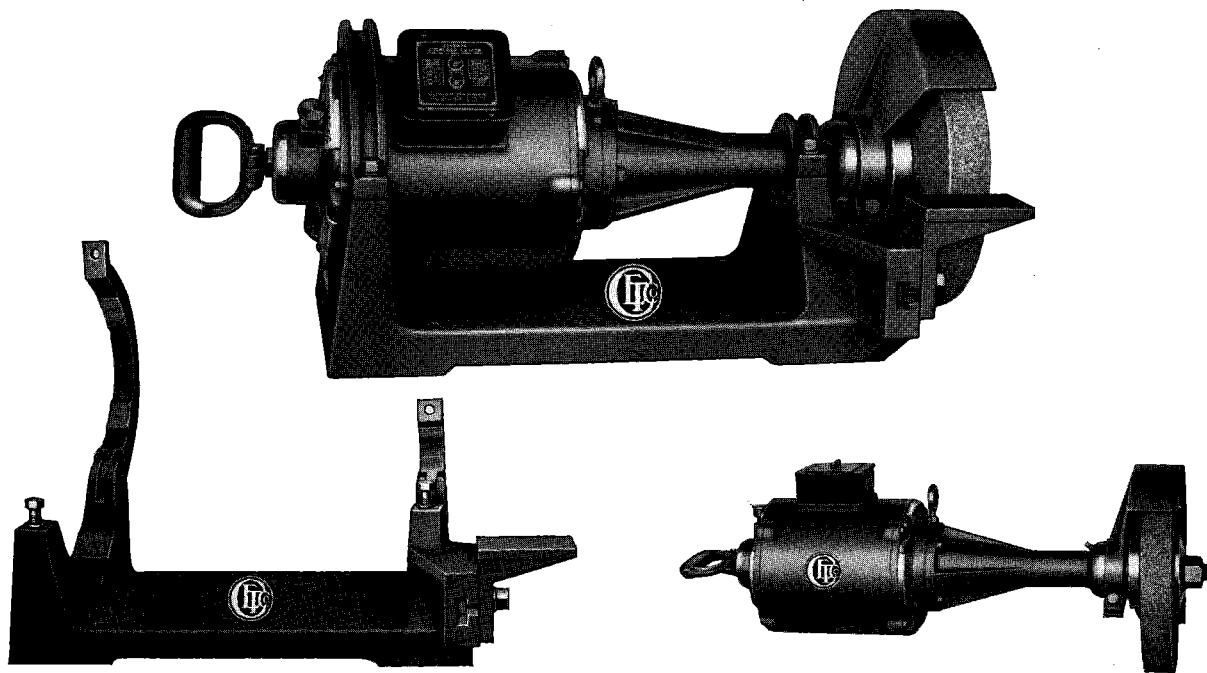
Type	Volts	H. P.	Load Speed, R. P. M.	Size Wheel	Diameter Shaft Bet. Flanges	Motor Dia. and Length Overall	Net Weight, Pounds	Shipping Weight, Pounds	Code Word
ABA	110-60-1	3/4	3475	7"x1 1/4"	5/8"	7 1/8"x25"	45	80	HALTER HANGER HONAGE HOPPER HOSTAGE HAIR
†ABA	220-60-1	3/4	3475	7"x1 1/4"	5/8"	7 1/8"x25"	45	80	
ASA	110-60-1	1	3400	8"x1 1/2"	3/4"	7 3/4"x34"	80	125	
†ASA	220-60-1	1	3400	8"x1 1/2"	3/4"	7 3/4"x34"	80	125	
*ARA	220-60-3	1 1/2	3400	8"x1 1/2"	3/4"	8"x35"	90	125	
*ARA	440-60-3	1 1/2	3400	8"x1 1/2"	3/4"	8"x35"	90	125	

†Can also be furnished for 220 or 440 volts, 2 or 3 phase, regular list price.

\*Made in 2 or 3 phase only. If 2 phase is desired, mention after code word.

### DIRECT CURRENT SPECIFICATIONS

AB	115	3/4	2675	7"x1 1/4"	5/8"	7 1/8"x25"	45	80	HAREM HATCH HOCKEY HOLLOW HAZEL HEALER
AB	230	3/4	2675	7"x1 1/4"	5/8"	7 1/8"x25"	45	80	
AS	115	1	2575	8"x1 1/2"	3/4"	7 3/4"x35"	80	125	
AS	230	1	2575	8"x1 1/2"	3/4"	7 3/4"x35"	80	125	
AR	115	1 1/2	2450	8"x1 1/2"	3/4"	8"x35"	90	125	
AR	230	1 1/2	2450	8"x1 1/2"	3/4"	8"x35"	90	125	



## Combination Aerial and Bench Grinder

Alternating Current, 2 or 3 Phase Only  
When Ordering Give Cycles and Phase.

**E**XTREMELY useful combination tool for general utility grinding in both small and large shops. A heavy duty fully enclosed ball bearing aerial grinder designed for the most severe service in grinding rough castings, welds or general grinding, buffing or polishing of all kinds.

The grinder is perfectly balanced, enabling the operator to grind in any position. It can be carried anywhere, as any length cord can be used. The wheel guard is of boiler plate and is adjustable to any angle most convenient for the operator.

The heavy cast base with adjustable cast-steel grinding rest makes possible the adaptability of this heavy duty aerial grinder as a bench grinder and is ideally suited for grinding tools and small castings of all kinds.

Quick change from bench to aerial grinder can be made by merely removing two cap screws.

Furnished complete with Bench Base, Grinding Wheel, Wheel Guard, Adjustable Grinding Rest, Suspension Spring and push-button safety switch.

If Aerial Grinder only is desired, deduct \$25.00 from list price.

### SPECIFICATIONS

Type	Volts	H. P.	Load Speed R. P. M.	Size Wheel	Diameter Shaft Bet. Flanges	Motor Diam. and Length Overall	Weight, Pounds Grinder only	Weight, Pounds Grinder and Bench Base	Shipping Weight, Pounds	Code Word
HBA	220-60-3	2	1750	14" x 2"	1 1/4"	10 1/8" x 37 3/8"	220	355	450	HEEL
HBA	440-60-3	2	1750	14" x 2"	1 1/4"	10 1/8" x 37 3/8"	220	355	450	HILT

If 220 or 440 volts, 2 phase, is desired, mention after code word.

---

---

## TELEGRAPH CODE

---

DIAMOND.....Wire price and delivery  
RUBY.....Wire best delivery  
EMERALD.....Enter order and ship via freight  
PEARL.....Enter order and ship via express  
MOSAIC.....Enter order and ship via Air Express  
SAPPHIRE.....Enter order and ship via parcel post  
AMETHYST.....Enter order and ship via parcel post special delivery  
SARDONYX.....Enter order and ship via Air Mail  
CORAL.....Enter order and wire delivery  
MOONSTONE.....Wire shipping date order  
OPAL.....When and how did you ship order?  
QUARTZ.....Trace shipment of order  
CRYSTAL.....Please hold order for further instructions  
ONYX.....Have you shipped order?  
AQUAMARINE.....Shipping your order via freight  
TURQUOISE.....Shipping your order via express  
CAMEO.....Shipping your order via parcel post  
GARNET.....Shipping your order via parcel post special delivery  
JADE.....Shipping your order via Air Mail

### GUARANTEE

Every electric tool has been carefully inspected before shipment and we guarantee to correct any defect due to faulty material or workmanship. Our obligation assumed under this guarantee is limited to making replacement of any part or parts returned to us at our factory, or to our authorized service stations, transportation charges prepaid, which prove to our satisfaction upon examination to have been defective and have not been misused or carelessly handled. We reserve the right to decline responsibility where repairs have been made or attempted by others. This guarantee is in lieu of any other liability on our electric tools or parts. None other is authorized.

**THE CINCINNATI ELECTRICAL TOOL CO.**


DIVISION OF THE R. K. LE BLOND MACHINE TOOL CO.

**CINCINNATI, OHIO — U. S. A.**





# The Largest Factory in the World Producing Electrical Tools



A plant comprising  
9½ acres of manu-  
facturing floor space  
houses the various  
departments devoted  
to the manufacture of  
"THE CINCINNATI"  
products.

District  
Sales Offices....

BOSTON  
CHICAGO  
DENVER  
DETROIT  
NEW YORK  
PHILADELPHIA  
PITTSBURGH  
SAN FRANCISCO  
SEATTLE

## THE CINCINNATI ELECTRICAL TOOL CO.

DIVISION OF  
THE R. K. LEBLOND MACHINE TOOL CO.  
CINCINNATI, OHIO, U. S. A.

